

FILE DESCRIPTION
PHILADELPHIA FILE

SUBJECT HARRY GOLD

FILE NO. 65-4307

VOLUME NO. 1-B-5

SERIALS (1)

thru

(28)

185 CONTINUED
NEXT PACKET

NOTICE

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File No: 65-4307

Re: Harry Gold (Bulky)

Date: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
	6/3/50	VARIOUS TYPE AND HANDWRITTEN NOTES <small>EASTMAN KODAK CO.</small>	42	42	
1B5 (2)	6-7-50	SA TO SAC MEMO	1	1	
	6-27-50	Description Letter SA memo to SAC	1	1	
	3-18-48	D. Green to Airmail Envelope Harry Gold	1	1	
	3-17-48	Letter from Green to Gold	2	2	
1B5 (3)	9-24-42	Envelope Postmarked Roswell N. Mex. From Murphy to Gold	1	1	
	9-23-42	Letter from Murphy to Gold	1	1	
1B5 (4)	6-7-50	SA Memo to SAC ^(Describing 5 Handwritten sheets) written by Gold	2	2	
		1 handwritten } notes from ① 2 typewritten } Gold's apartment	3	3	1 DUP
		1 handwritten } notes from ② 2 typewritten } Gold's apartment	3	3	1 DUP
		1 handwritten } notes from ③ 1 typewritten } Gold's Apartment	2	2	
		1 handwritten } notes from ④ 1 typewritten } Gold's Apartment	2	2	
		1 handwritten } notes from ⑤ 1 typewritten } Gold's Apartment	2	2	

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Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
1B5 (5)	6-12-50	Brown wrapping for Manila envelope	-	-	
	6-3-50	Manila Envelope - Addressed to Al Slack Bldg. 110	-	-	
	6-3-50	Composite Photograph	-	-	Photo's cut up + indistinguishable, most too dark - unable to copy
1B5 (6)	3-7-43	The Worker (newsclipping) To Harry Gold	-	-	NEW YORK March 7, 1943 (2 sections) - 40 pages SUNDAY ISSUE NOT COPIED
1B5 (7)	10-4-49	Envelope Postmarked Barton Mass	1	1	ENVELOPE EMPTY
1B5 (8)	7-13-50	SA Memo to SAC Cover Memo Piece of white paper	1	1	
	6-3-50	with certain penciled writing	1	1	
1B5 (9)	7-13-50	SA Memo to SAC Cover Memo	1	1	
	6-3-50	Scrap of paper towel with writing	1	1	
1B5 (10)	6-3-50	5x7 index card with writing	1	1	
1B5 (11)	7-13-50	SA Memo to SAC Cover Memo To Gold From Krouse	1	1	
	8-22-49	Envelope Postmarked Pa	1	1	

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			Actual	Released	
1B5(11) cont	6-3-50	Letter to Harry from Ted	1	1	
1B5 (12)	6-3-50	AGENTS IDENTIFYING NOTE + Copies of pages from book in German	5	5	
	6-3-50	Translation from the German	2	2	
1B5 (13)	6-3-50	Written info. about Paul Starcher	2	2	
1B5 (14)	5-24-46	Letter to Harry from Doc	4	4	
1B5 (15)	6-7-50	SA memo to SAC Airlinc Schedule Gold's info.	1	1	
	6-23-50	SA memo to SAC about schedule	1	1	
	6-3-50	United Airlines Flight Schedule To Sherwin-Williams Co.	-	-	NOT COPIED → APRIL 28, 1946 (12 Pages) effective for ↑
1B5 (16)	6-3-50	Postcard From J.H. Bowen	2	2	
1B5 (17)	7-13-50	SA memo to SAC Cover letter	1	1	
	6-3-50	Manila envelope J.H. Bowen's Job	1	1	
	5-3-38	Envelope to Gold from Drexel Institute	1	1	

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			Actual	Released	
1B5 (17) cont	5-3-38	Letter to Drexel Inst from ^{Park} Kolbe	1	1	
	6-3-50	Applications for Federal Employment	4	4	
	6-3-50	3x5 card/reference to ^{Fish -} Schurman Co.	1	1	
	6-3-50	handwritten info. about ^{Pennsylvania} Sugar Co.	2	2	
	6-3-50	perforated paper library searches	2	2	
1B5 (18)	6-3-50	IDENTITY negatives envelope containing 6 negatives	—	—	THE WORDS "A. D. Slack 1935" appear on each NOT COPIED
	6-3-50	Hardback Book "From Double Eagle to Red Flag"	—	—	NOT COPIED See attached sheet #1
1B5 (19)	6-3-50	all dupes not viewed envelope containing 6 negatives	—	—	each negative has the words "THE SLACKS MARCH 1943"
	6-3-50	Hardback Book "Genesee Fever"	—	—	See attached sheet #2
1B5 (20)	6-3-50	Paperback Book NOT COPIED "The Twilight of World Capitalism"	—	—	See attached sheet #3
1B5 (21)	6-3-50	Paperback Book NOT COPIED "Notes from The Gallows"	—	—	see attached sheet #4
1B5 (22)	6-7-50	SA memo to SAC Cover	1	1	

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Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
1B5(22) Cont.	6-3-50	Celluloid picture in color of Gold	1	1	
	6-2-50	Letter from Heiler in German	1	1	
	6-2-50	Translation from German	1	1	
1B5 (23)	6-3-50	Paperback Book "Microbe Hunters"	+	-	See attached sheet #5

File No: 65-4307Re: Harvey GoldDate: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
185 (24)	6/3/50	"Reliance Coffee" Books of Matches	1	1	
(25)	6/3/50	Anton B. Tokarski Restaurant Business Card	1	1	
(26)	6/3/50	Reading Railway System envelopes containing 4 tickets	8	8	
(27)	7/13/50	SA letter to SAC describing Memorandum book	1	1	
11	11	1 Green memo book dated 1947	3	3	only pages with writing were copied - the rest were blank
(28)	6/3/50	photostat copies of pages written ex German - from book	5	5	
		continued next packet			

PUBLIC SOURCE DOCUMENTS
65-4307-1-B-5

1. serial 18- "FROM DOUBLE EAGLE TO RED FLAG"
General P.N. Krassnoff
Translated from the Second Russian Edition
by Erik Law-Gisiko
Blue Ribbon Books, NY copyright-1926 852 pgs.
2. serial 19- "GENESEE FEVER"
Carl Carmer
Farrar & Rinehart Inc., NY
copyright-1941 360 pgs.
3. serial 20- "THE TWILIGHT OF WORLD CAPITALISM"
William G. Foster
International Publishers, NY
copyright-1949 168 pgs.
4. serial 21- "NOTES FROM THE GALLOWS"
Julius Fuchik
New Century Publishers, NY
copyright-1948 112 pgs.
5. serial 23- "MICROBE HUNTERS"
Paul de Kruif
Harcourt, Brace & Company
Pocket Books Inc, NY
copyright-1926 400 pgs.
6. serial 29-1 -"POLITICAL AFFAIRS"
June 1947
New Century Publishers
832 Broadway NY, NY
7. serial 38- "TEN YEARS OF THE COMMUNIST INTERNATIONAL"
I. Komor
Workers Library Publishers
35 East 125th St. NY, NY
March 1929 46 pgs.
8. serial 49- "CHEMICAL EQUIPMENT REVIEW"
July 1942
Putman Publishing Company
737 N. Michigan Ave.
Chicago, Ill. 72 pgs.

continued...

PUBLIC SOURCE DOCUMENTS continued...

9. serial 50- "ACHIEVEMENT"
Tri-State College Bulletin
September 1937 vol 54 60 pgs.
10. serial 51- "FOOD INDUSTRIES"
McGraw-Hill Publishing Company
Albany, New York
March 1940, Vol 12/Number 3 140 pgs.
11. serial 56- "THE FUTURE"
February 1916
Published Forwards Association
(in Hebrew) 109 pgs.
12. serial 55- "INDUSTIAL & ENGINEERING CHEMISTRY"
Acedic Anhydride
Reinhold Publishing Corp. NY
October 20, 1935 16 pgs.
13. serial 57- "HEALTH & HYGIENE"
March 1936
H & H Publishing
copyright-1935 Union Square, NY 34 pgs.
14. serial 58 & 59- DEPARTMENT OF ENGINEERING RESEARCH
University of Michigan, Ann Arbor
"DUST-REMOVAL EFFICIENCY OF SCHNEIBLE
MULTI-WASH BUST COLLECTOR"
by Hugh E. Keeler
Project # 1M72
Claude B. Schneible Co. Chicago, Ill.
July-December, 1936 8 pgs.
15. serial 60- "CATALYST"
Arthur H. Thomas Co.
Vol 18, Number 6 25 pgs.
16. serial 61- "CATALYST"
October 1933 21 pgs.
17. serial 62- "CATALYST"
Late Summer Directory Issue
1932 25 pgs.

PUBLIC SOURCE DOCUMENTS continued...

18. serial 68- "TALES TOLD IN LONG HOUSE"

Fifteen selected Indian legends as handed down
in the folk lore of the Iroquois for your reading
with the compliments of
THE CARBORUNDUM COMPANY
Niagra Falls, New York

FD-161
(7-1-48)

BULKY EXHIBIT

Date received 8-3-50

HARRY GOLD

ESP R

(Title of case)

Submitted by Special Agent R.A. Pett & Thomas F. Carrig

Source from which obtained Home of Joseph Gold

Address 6823 Kindred Ave., Phila., Pa.

Purpose for which acquired Evidence

Location of bulky exhibit Bulky Exhibit Room

Estimated date of disposition 12-1-50

Ultimate disposition to be made of exhibit to be determined

RETIPTED

List of contents:

1. Jacket file folder entitled "Flue Gas from Smelters" containing misc notes & other material. (cont Sub 6-12-50, Dated 7-19-50)
2. Airmail envelope & ltr to Harry Gold postmarked Mar 18, 1949, Los Angeles, Calif.
3. Ltr to Harry Gold from Pvt Wm. J. Murphy postmarked Roswell, New Mexico Sept 24, 42
4. Jacket file folder containing misc notes identified by PCB & FFB. (cont Sub 6-12-50, Dated 7-19-50)
5. Manila envelope of Eastman Kodak Co., Rochester, NY with name Al Slack Bldg. 110 on front containing photographs. (cont Sub 6-12-50, Dated 7-19-50)
6. Copy of The Worker dtd Mar 7, 1943.
7. Envelope addressed to Harry Gold postmarked Boston, Mass Oct 4, 1949
8. Piece of notepaper with name Mr. Theodore Kapala, et al.
9. Piece of paper towel with name of Dr. E. E. Meyers, et al.
10. Paper card with name Dr. E. L. Beckman, etc.
11. Ltr addressed to Harry Gold from Theo B. Krouse, postmarked A...ington, Pa. Aug 22, 49
12. Four photostats in German identified by TFC.
13. Notepaper re: Paul Starcher.
14. Ltr without envelope to Dear Harry: from Your pal, Doc dtd May 24, 46. 65-4307-1-0
15. United Air Lines time table effective Apr 28, 1946.
16. Postcard with name J. H. Bowen, etc.
17. Manila envelope marked J. H. Bowen's Job, containing misc papers.
18. Book entitled "From Double Eagle to Red Flag," by General Krassnof.
19. Book entitled "Genesee Fever" by Carl Carner. (cont Sub 6-12-50, Dated 7-19-50)

SEARCHED	INDEXED
SERIALIZED	FILED
NOV 27 1951	
FBI - PHILADELPHIA	

*Serials 1-28 from this list
in this packet*

*Return 11/14/58
Return 5/3/67
Return 9/13/69*

20. Book entitled "The Twilight of World Capitalism" by William Z. Foster.
21. Book entitled "Notes from the Gallows" by Julius Fuchik.
22. Ltr in German signed by B. Heiler.
23. Pocket Book entitled "Microbe Hunters" by Paul deKruif.
24. Two match books from Seattle, Wash.
25. Card of Anton B. Tokarski.
26. Reading RR ticket envelope containing Pullman stub tickets and Theatre Tickets.
27. A 1947 Pocket Dairy book.
28. Four photostats in German identified by TFC.
29. Red Fibre Folder containing miscellaneous blueprints, correspondents and notes identified by FCB. *(from and Lab 4-18-57) (also 2 1/2" x 3 1/2" photo of note 7-11-57)*
30. One piece of paper with name Mrs. Sarah Pecker. *(Lab 7-11-57)*
31. One piece of paper with name S. M. Snyder.
32. Ltr addressed Dear Harry from Ed dtd 2-1-48.
33. Check on National City Bank of NY dated 11-29-47 signed S. Brothman, also similar checks dtd 12-13-47 & 1-3-48.
34. Ltr addressed Harry Gold and Philip Levine signed Miriam in envelope from Brothman & Moskowitz, Basil Switzerland.
35. Ltr 16 pages addressed to Harry Gold and Philip Levine signed SBE in envelope from Mr. A. Brothman, Basel, Switzerland.
36. Ltr. to Harry Gold from Levine postmarked Flushing N. Y. Oct 27, 1948.
37. Envelope containing Statement of Salary Due. Envelope from Newhouse Hotel Salt Lake City, Utah.
38. Small Book entitled "Ten Years of the Communist International by I. Komor.
39. Envelope addressed Harry Gold from Jean 1841 S. Alden St. Phila. Postmarked Phila March 31, 1948.
40. Airmail ltr to Harry Gold from Mrs. Dr. Green, Los Angeles, Calif, postmarked Feb 2, 48.
41. Ltr to Harry Gold from Oscar J. Vags postmarked NY June 30, 1948.
42. Ltr to Harry Gold from Philip Levine postmarked Storrs, Conn. July 30, 1948.
43. Ltr to Harry Gold from Philip Levine re retaining Robert Hoffman, Atty. postmarked Flushing NY Sept 15, 1948.
44. Ltr without envelope to Harry from Phil dtd Aug 30, 1948 enclosing statement re back Salary due Gold and Levine from A. Brothman.
45. Ltr without envelope to Harry and Butch from Doc dtd Nov 15, 1945.
46. Purse calendar containing 3x5 white paper.
47. Envelope postmarked Far Rockaway July 23, 1951 from Cottman.
48. Loose leaf Spiral notebook of University of Penn.
49. Magazine entitled "Chemical Equipment Preview July 1942 containing name Art Simmers.
50. Tri State College Bulletin Sept 1937 Vol 54 #3.
51. Magazine food Industried March 1940.
52. White paper containing pencil notes.
53. Three yellow sheets containing names and addresses.
54. Selective Service return envelope Local Bd #65.
55. Magazine Industrial Engineering Chemistry Vol 27 #35.
56. Jewish language magazine bearing word Future Feb 1916.
57. Magazine Health and Hygiene March 1948.
58. Dept Eng Research Magazine.
59. University of Michigan Bulletin Dec. 1936.
60. Catalyst Vol 18 NO6, June, July 1933.

61. Catalyst Oct. 1933.
62. Catalyst Vol 17, No 7, 1932.
63. Little Red Book year 1948.
64. Post card from M. Rabacchi to Harry Gold Postmarked 4-14-49.
65. Card to A. F. Byron, Imis, Speiden & Co.
66. One bunch of 3x5 cards with names and addresses--37 cards.
67. Letter without envelope to Harry from Marion dtd Oct 27, 48.
68. Pamphlet entitled Sales told in the Long House , Niggara Falls, New York.
69. Envelope containing 12 papers and business cards.

November 19, 1951

SAC, Philadelphia (65-4307)

SAC, New York (65-15324)

HARRY GOLD, was

ESP-R

Reurlet 11/8/51.

In accordance with your request, there are being forwarded under separate cover the serials and exhibits obtained from your files in instant matter.

cc - Sep Cov ✓

JCH:IM

65-4307-1B5

ITEM # 11

PHILA FILE # 65-2307-1-B-57A



SAC

6-7-50

SA ALBERT L. PIERCE

HARRY GOLD, was.
ESPIONAGE - R

RE: GOLD RESIDENCE SEARCH MATERIAL

Exhibit No. 65-4307-1-B-5 (1)

Reference search memorandum of SA ELWOOD A. PITT, dated 6-5-50, Page 16.

Description: A manilla folder bearing the notation "Flue Gas From Smelters", containing 39 pages of material (reference memo indicates 20 pages), some of which is typewritten, some handwritten, some photostats. Some of this material was stapled together with the top sheet bearing the notation: "The accompanying material represents material and data concerning work which has been done on the problem of silver recovery from salvaged photographic emulsion."

The typewritten portions of this material appeared to be Eastman Kodak Company Chemical Plant memoranda addressed to Mr. M. J. REID, Building #46. These memos were dated June 8, 1938, September 9, 1940, and October 23, 1940. The last two of these memos had a check mark beside the name, Mr. MILLARD, one of the persons to whom copies were distributed.

Another of these memos to Mr. REID, dated February 4, 1938, regarding silver recovery was a yellow carbon copy of a memorandum dictated by J. E. MILLARD.

There is also a two-page typed memorandum entitled "Recovery of 213 Removable Jet Scrap Report #2", signed A. D. SLACK.

An Eastman Kodak Company, Rochester, New York, KP Works, Engineering and Maintenance Department photostat of a blueprint was in this folder. The blueprint was entitled, "Scrubbing Tower (Steel) for Smelting Gases -- Silver Recovery." This was dated January 10, 1937, but had a pencilled 8 over the 7. On the back of this photostat was stamped, Issued by E & M Department, EK Company, KP Works, January 10, 1938 to (Blank).

The handwritten notes in this folder bore the following titles:

"Silver Collected by Traugher Unit"
"Apparatus for Determining Dust in Gas"
"Run on American Blower Company Cyclone"

ALP:am
65-4307

am

MEMO, SAC

6-7-50

"Results of Scrubber Tests"
"Water Discharge Silver Content"
"Tests on Electrostatic Precipitator"
"Dust Collector"
"Scrubbing Tower for Smelter Gases"
"Stack Flow Building #10"

This last set of notes was on a form entitled, E & M Department Computations, Eastman Kodak Company, Kodak Park Works, and was dated January 17, 1938, and signed by S. L. FORSYTH.

Leads:

Will exhibit the contents of this folder to HARRY GOLD for his explanation regarding their source.

If GOLD admits that this information was obtained by him personally or through a contact from the Eastman Kodak Company, will consider the advisability of exhibiting this material to Mr. J. E. MILLARD, who apparently was employed at the company during this period, to determine if this material was obtained from his files or from the files of any other persons whose names appear in this material or any others known to him.

①

4/6/50

28

283

24

Stack

Recovery of EMB Removable Jet Scrap

Report No. 2.

(1) A report on the proposed method for recovering the scrap from EMB roll and coated Removable Jet was recently submitted. This proposed method recommends the use of activated carbon to prevent staining of the film base by the sensitizing dyes during the processing of the scrap and proposes that the Gelva resin which is present in the nitrate/Gelva resin sub layer be permitted to remain in the scrap and in the final dope.

To determine the effect of the presence of Gelva resin in the dope upon the EMB films coated from such dopes, sample dopes were made from a scrap processed by the proposed method and from a standard EMB dope containing increasing added amounts of Gelva V-25 resin. These preliminary test dopes were made up as follows:

<u>Exp. No.</u>	<u>Formula</u>	<u>Dope Appearance</u>	<u>Coated Film Appearance</u> <u>.0055" Thickness</u>
ALB-1617	(Check) Regular EMB dope	Clear & transparent	Clear & transparent
ALB-1618	0.08 gm. Gelva/500 gms. dope normal scrap content	•	•
ALB-1619	0.16 gm. Gelva/500 gms. dope 2X normal content	•	•
ALB-1620	0.32 gm. Gelva/500 gms. dope 4X normal content	•	•
ALB-1621	0.64 gm. Gelva/500 gms. dope 8X normal content	•	•

Since these dopes and films on preliminary tests showed no abnormal appearances or behavior, a further series of dopes were made up to secure physical tests on the films containing varying amounts of Gelva resin.

(2) The results secured from these test films are shown on the attached tabulation. In each experiment, dope made from 100% new cellulose acetate propionate and plasticizer were used, and varying amounts of the Selva resin were dissolved into the dope. These dopes were finally filtered and films coated from them on to glass plates.

Scrap Film and Selva:

The EM3 scrap film as normally received by the Recovery Department contains an amount of Selva resin equal to 0.133 grams per 100 grams of scrap film. If this scrap (after processing by the new proposed method) is doped with an equal part of new ester and finally coated to produce film base which is 50% passable product and 50% waste, and this waste is returned again and again for recovery, the maximum amount of Selva which the film will attain is 0.266 grams of Selva per 100 grams of scrap. This is XI, the normal amount present on the film as it is now released to the trade. (Average production figures indicate that 70% of the Selva scrubbed EM3 is released as passable product and 30% returned as waste).

The physical tests which have been run on the experimental films containing varying amounts of Selva resin, indicate that the only appreciable change in film properties is a decrease in tear value. These values, however, are based on the fact that the Selva is dispersed throughout the sheet. Actually, in production, a film base produced from the 50:50 mixture of scrap and new ester will never contain an amount of Selva (dispersed throughout the film) greater than 0.133 grams per 100 grams of film base. According to the physical tests, such an amount of Selva within the film confers no significant change on the physical properties of the film.

As a result of the tests on these dopes and films, a 500-pound batch of the EM3 Coated Rem. Jet is being processed for recovery purposes with the activated carbon; the Selva resin will be left on the film and the scrap doped with an equal part of new ester for a large scale coating experiment.

Further reports will be submitted as results become available.

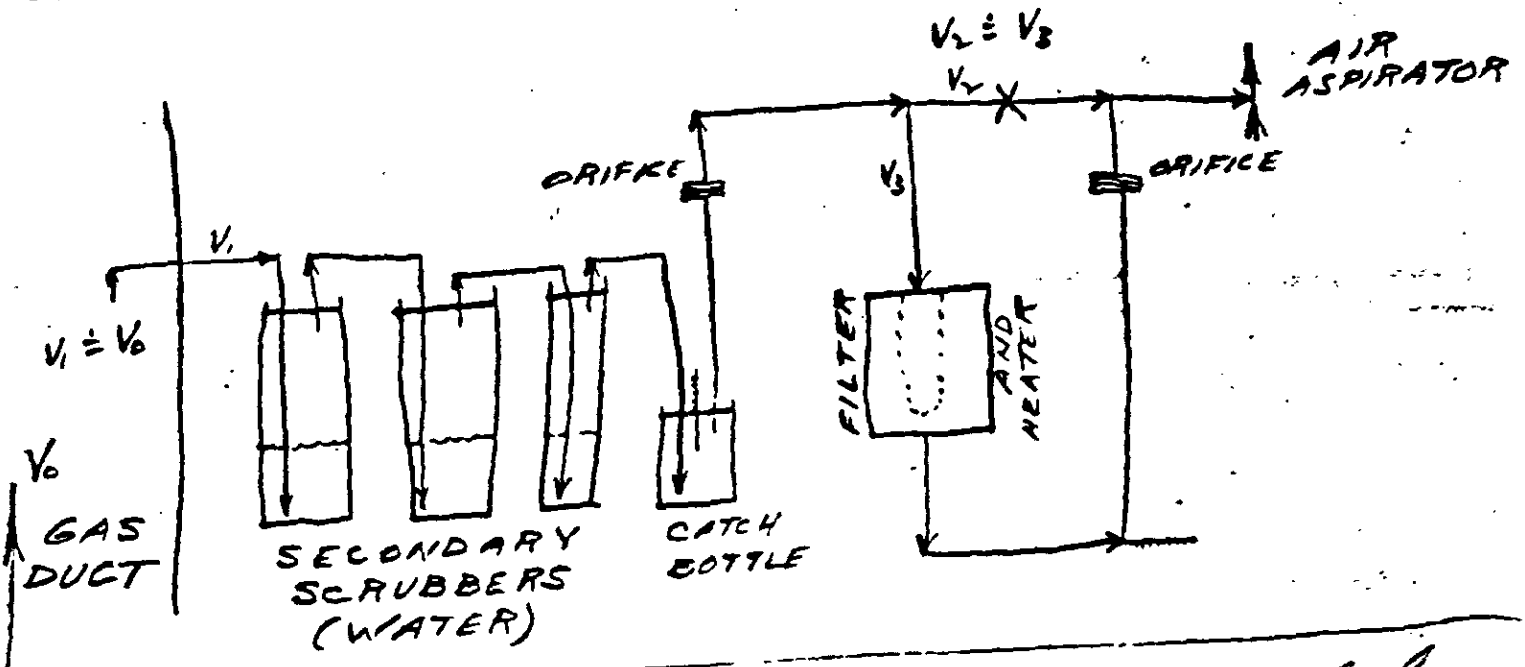
ADSlack:MK

1-14-42

Enc.

A. D. Slack

Apparatus for Determining Dust in Gas ^{6/15/50}
 from R. R. Harmon, Peabody Engineering Corp.
 S. Foreyth Bldg 23, has original drawing.



The secondary scrubbers remove a large part of the dust and protect the fine filter. After passing through first orifice, the flow is divided and one half passes through the fine filter while the remainder goes directly to the aspirator.

Filter is formed by laying down under vacuum acid washed and ignited short fibre asbestos in a layer $\frac{1}{16}$ " - $\frac{1}{8}$ " thick on 30-40 mesh screening. During test filter must be free of moisture condensed from the gas so it is heated above dew point of the gas.

Item #3 Electrostatic Precipitator, Bldg 110

6/3/50
80
500

$$\frac{385}{31} = 12.5 \text{ troy } \frac{\% \text{ dust}}{2.83\%}$$

0.3500 troy silver in dust

Find dust accumulated in each hour by trail error:
 0.28 in 1st hour in unit 0.14 in gas 0.42 total
 0.07 in 2nd hour 0.25 in gas 0.32 total

Dust in unit	Dust in gas	Total in
1st hr 0.20	0.14	0.34
2nd hr 0.15	0.25	0.50
0.25	0.14	39
0.10	0.25	35
0.24	0.14	38
0.11	0.25	36
0.23 ✓	0.14	0.37
0.12 ✓	0.25	0.37

$$\% \text{ removed in first hour} = \frac{0.23}{0.37} 100 = 62\%$$

37 $\overline{) 2300}$
 222
 80
 94

$$\% \text{ removed in second hour} = \frac{0.12}{0.37} 100 = 32\%$$

0.37 $\overline{) 12000}$
 111
 90
 150

$\frac{1100}{0.07}$

$\frac{157}{71100}$

15700

16 000

600

960 000

Run on American Blower Co. Cyclone 65° warm up
90° test
5-27-38

Basis - One hour and flow through unit 6 3/8" / 800

Upstream sample	0.247	oz Ag per hour
Downstream sample	0.245	" " " "
Silver removal by difference	0.002	" " " "
or	1%	
<hr/>		
Silver in dust from cone	0.019	oz Ag per hour
Silver removal	8%	
<hr/>		
Silver in dust from cone during warm up	0.112	oz Ag per hour
Silver removal (assuming same gas as during test)	45%	

Smelters - Two for entire runs } 600 oz/ton slag
the other for 1st 45 mins only }
smelter - operating

Static pressure drop across cyclone after 40 min. of the test was 6 3/8" water 257° F air

Silver Collected by Traugber Unit 6/3/50
7/11
200

	Gals	oz Ag gal	oz Ag
Settling Tanks			
(Tops) North	268	0.0031	0.83
South	268	0.0002	0.05
Weir Bases			
(Tops) North	55	0.0038	0.21
Center	25	0.0037	0.09
South	55	0.0038	0.21
Wash Water			
North Side	44	0.0468	2.1
South Side	43	0.0773	3.3
Combined Mud from All 5 Tanks	(120 lbs)		44.01
			50.8 oz

Exp. 239
9-30-38

RESULTS OF SCAUBBER TESTS

Run #	Water Rate S.P.M.	Gas Rate C.F.M.	Water Discharge Concentration % of 1000 cc/gals	Gas Discharge Concentration % of 1000 cc/gals	Silver Removed by Water - % of theoretical fine	Parts of Silver in Streams Leaving Scrubber, Gas/Water
2	1.58	317	2.1	2.5	0.23 +100	10.9
3	4.30	317	0.5	1.3	0.06	21.7
4	2.40	500	2.3	11.3	0.10	113.0
5	1.00	252	1.2	2.0	0.04	46.5
6	0.91	395	3.5 Run #6 -	8.5 precipitator	0.07 removed	114.0 0.5% ag/lb
7	3.0	320	Scrubber removed 58% of silver;	1.4	1.9	0.74
8	5.0	310	Scrubber removed 42% of silver; pptor removed 15%.	1.98	1.45	1.35

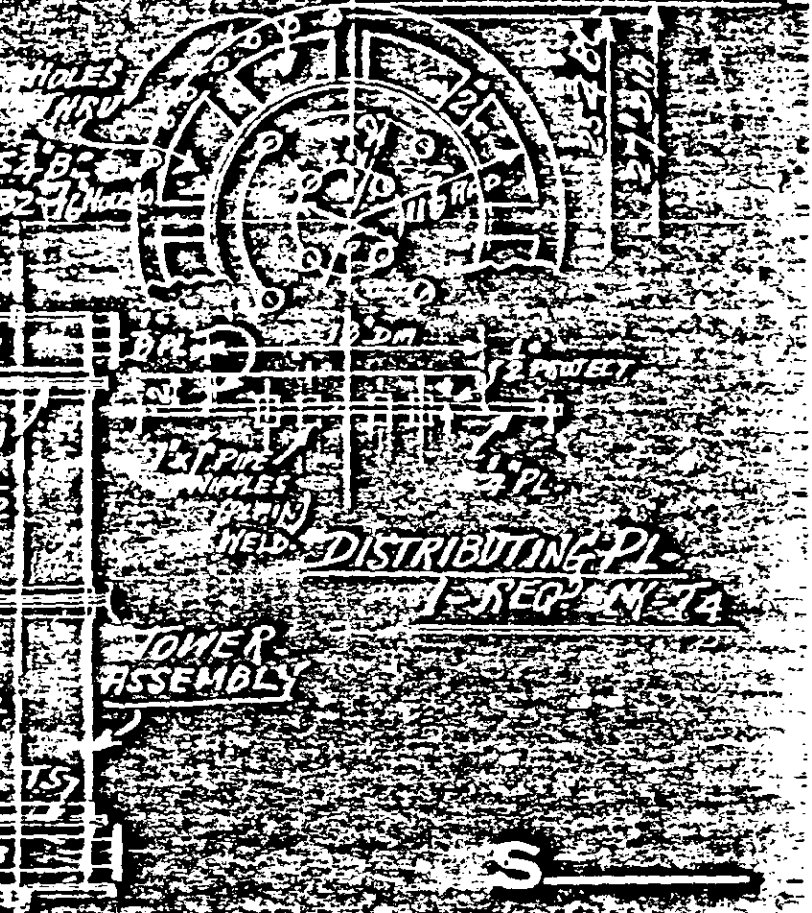
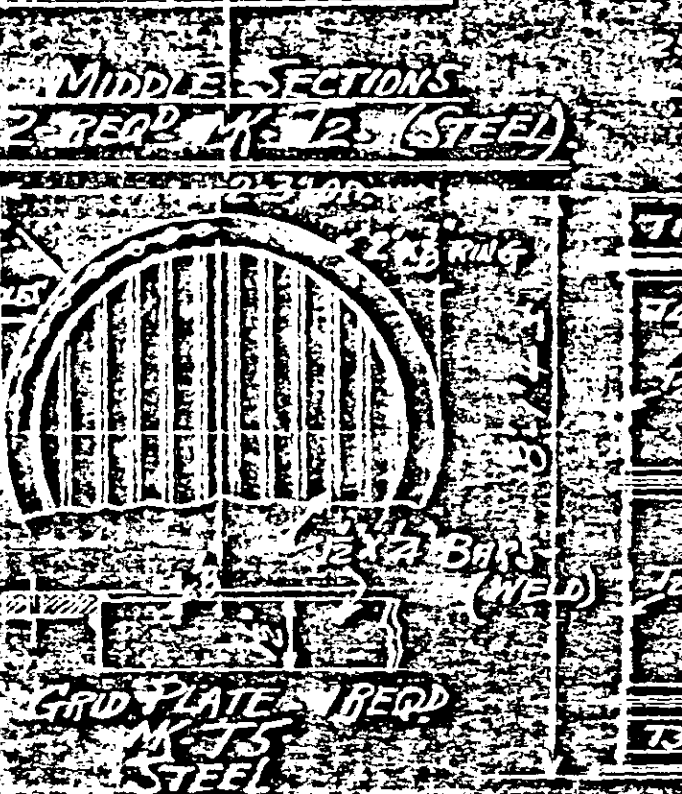
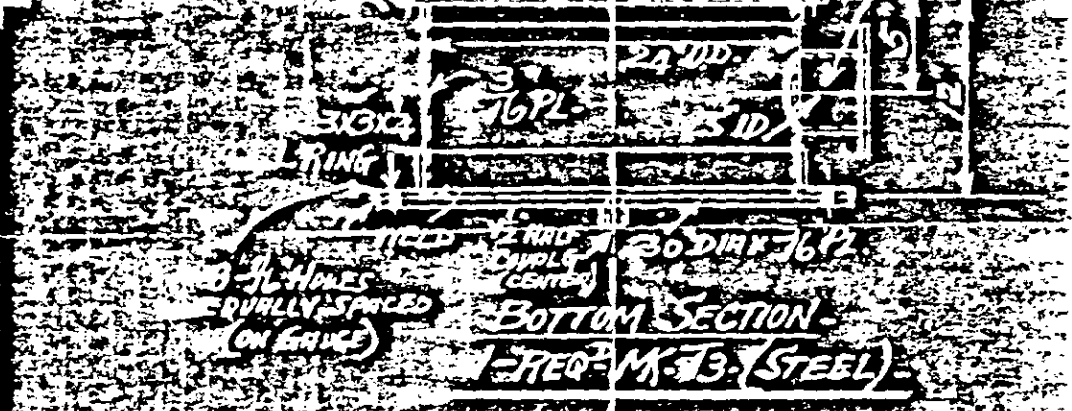
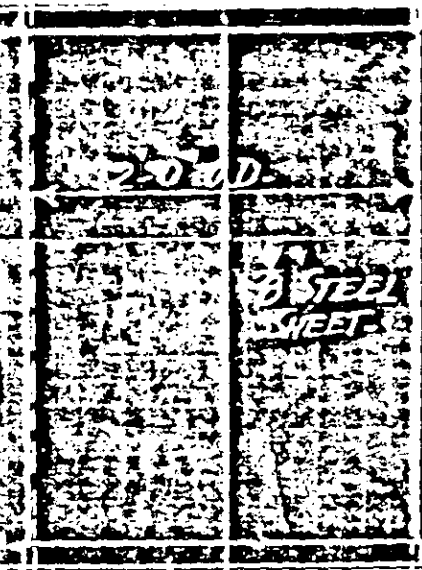
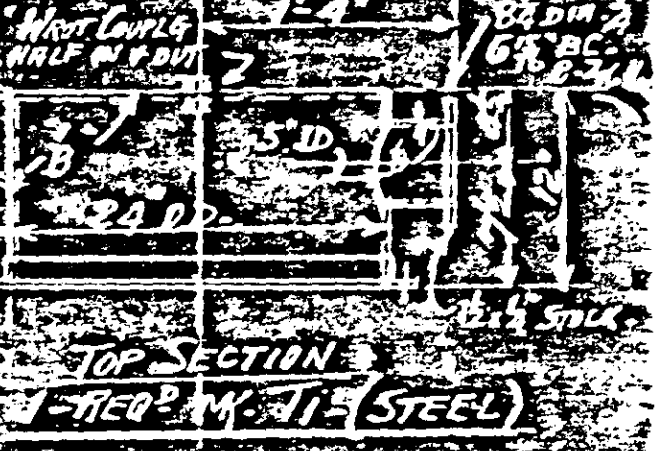
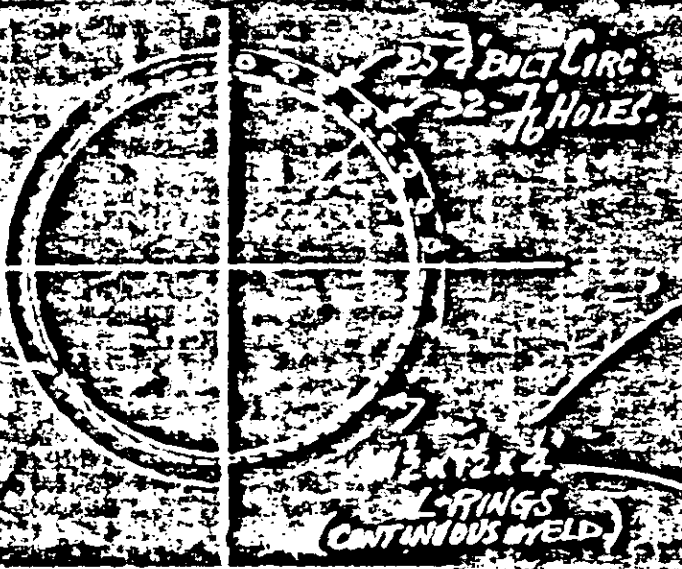
6/3/50
JEB
200

$T_{min} = 1, L = 2'$ c.s. area = 3.14 ft^2
 $\text{Flow} = \text{Capacity} \times \text{c.s.} = \frac{300}{3.77} \times 60 = 4800$
 $\text{Water Rate} = \frac{3.5 \times 8.35}{3.77} = 9.3 \text{ lb/min} / \text{ft}^2 \text{ of area}$

I.D. No. **710** RETURN TO ENGINEERING AND MAINTENANCE DEPT. **S**
 LOCATION **K.P.W.** EASTMAN KODAK CO. ROCHESTER N. Y. K. P. WORKS DATE **4-10-37**
 TITLE **SCRUBBING TRUMER (STEEL) FOR SMELTING GNSES - SILVER RECOVER**

DESIGN	
CONST. ENG.	
DEPT. CHIEF	
DR. P. L. G. M.	
ENG. MADE	
CONST. ENG.	

POWER ENG.	
SERVICE ENG.	
MASTER MECH'D	
CHIEF EFFICIENCY	



Tests on Electrostatic Precipitator - Bldg 110	Furnace Operating	% of Air Collected Dust	Ag in Discharge Eases Through Unit	Total Flux	% of Removal from Chamber
1	1-6-38 1 melter	3.52 72%	not	measured	
2	1-17-38 1 hour 2 melters + melter	1.35 100%	0.13	1.85	50
3	1-21-38 2 hours 2 melters + melter	2.83 11.50%	1st hour 0.14 2nd hour 0.25	2.0 3.6	62 32

8:50 0.125 $\frac{135}{135}$
constant
9:30 $\frac{190}{135}$
melts 0.170 @ 10:45

Start
Part
Furnace
Furnace

6/2/50
J.P.
800

$$28 \times 24 =$$

$$\begin{array}{r} 24 \\ \hline 112 \end{array}$$

$$\frac{56}{672} \text{ hours per period}$$

$$\times 4$$

$$\frac{224}{1288}$$

hrs of per period

$$2576$$

(A)

U/3/50
2/10
2/19

The accompanying material represents material and data concerning work which has been done on the problem of silver recovery from salvaged photographic emulsion.

CHEMICAL PLANT

KODAK PARK

June 8, 1938

Mr. H. J. Reid, Bldg. 46.

Tests have been run on a small cyclone separator from the American Blower Company operating on flue gas from the smelters at Bldg. 110. The unit was able to remove only 8% of the dust present.

The section above the conical part of this separator has a volute shape and the incoming gas stream enters this tangentially. When leaving the unit the gas is discharged tangentially from another smaller volute casing on top of the unit. The separator is designed to operate with an intake velocity of about 2000 ft. per minute which causes a pressure drop of six inches of water across the unit. This would, of course, require a fan in a full size installation.

Before making the test the unit was warmed for one hour by flowing gas, then the bottle for dust was changed and the test run for ninety minutes. Smoke samples were taken in the usual manner, one on each side of the separator. Results of the test were as follows:

Silver in dust accumulated by unit during warm-up period	0.112 oz. per hr.
Smoke samples:	
Upstream from unit	0.247 " " "
Downstream from unit	0.245 " " "
Silver in dust accumulated by unit during test period	0.019 " " "

Part of the dust brought down during the warm-up was probably condensed by the cold unit.

Since this unit can remove only 8% of the silver in smelter flue gas, it does not appear promising.

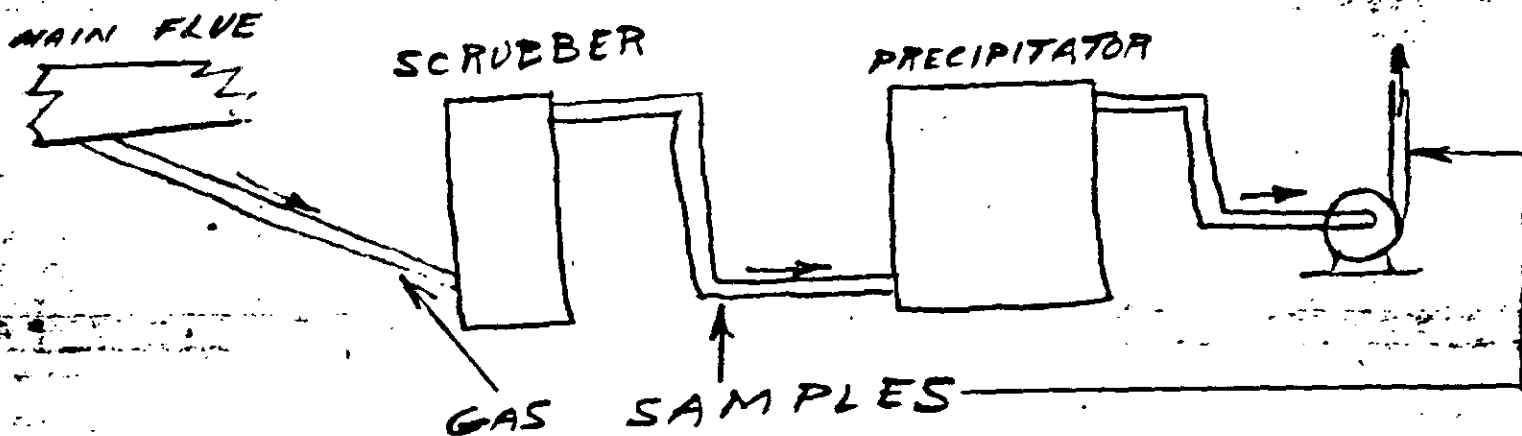
JKillard:MH
cc. Mr. Folwell
Mr. Izard
Mr. Forsyth

EXP. 163

6

Water Scrubber - Run #7

1/2/50
1000
500



Results: Basis - One hour and total flow through main flue

	Water Scrubber	Electrostatic Filter
Silver removed - oz	1.92	0.72
% of total received by scrubber	57	22
% of total received by each unit	57	50
Total % removed by both units	79	

Conditions:
 Water Rate - 3 G.P.M. Run for 1 1/2 hrs (a cycle)
 Gas Rate - 320 C.F.P.M.

Millard

1	3:40	2:55
2	3:25	3:45
3	4:15	

1170
300

Tests on Electrostatic Precipitator

Run Number	1	2	3	
Date	1-8	1-17	1-21	
Length of test - hours	not measured	1	2	
Furnaces operating	1 smelter	2 smelters + smelter	2 smelters + smelter	
Dust removed from precipitator, troy oz.	12	10	12.5	
Percentage silver in dust -oz. Ag removed/hr. total flow	3.82	1.85 1.93	2.88 2.53	
Silver in discharge from precipitator, troy ounces per hour,			1st hour	2nd hour
gas through unit	not measured	0.18	0.14	0.25
total flow of gas		1.85	2.0	2.6
Percentage of silver removed from gas stream by precipitator		80	82	82

After each run all dust was removed from the unit by brushes collected and sent to the Chemical Plant Laboratory for assay. Gas samples were taken by the regular method of absorption in water.

Approximate flow through unit 1100 cu. ft. per min., through main Flue to stack 15,000 cu. ft. per min.

JWILLARD:CR
2-4-33

Run #6 % Ag in dust from precipitator was 2.6%

CHEMICAL PLANT

KODAK PARK

February 4, 1938

Mr. M. J. Reid, Bldg. #46.

The flue gas from smelting and melting furnaces in operation at Bldg. #110 has been found to carry 4 - 6 troy ounces of silver per hour or 1500 - 2500 ounces per period. To prevent this loss three types of equipment have been proposed; an electrostatic precipitator, a cyclone type gas scrubber, a water scrubber, or a combination of any of these.

A small electrostatic precipitator has been borrowed from the Pangborn Co. and installed so that a fan withdraws about 7% of the total flow of flue gas through it. Mr. Pool, Mr. Forsythe of the E. and M. Department, and myself have run three tests on this equipment. The results are shown on the attached sheet.

The third run was the most complete and leads to the conclusion that dust in the gas is so bulky that it coats the charged plates of the precipitator after an hour. Measurements made showed that while the pressure drop across the plates remained constant at 0.125 inches of water during the first 40 minutes, it had risen to 0.178 inches at the end of two hours. Also, the percentage of silver removed from the stream fell from 62% in the first hour to 32% in the second hour.

To improve conditions of operation of the precipitator a dry dust separator of the long cone cyclone type has been ordered and will be installed just upstream from it. This is expected to remove the comparatively large particles, leaving the small ones to be collected by the precipitator. Also, a water scrubber has been designed and is being constructed.

JEMillard:GR

cc: Mr. Folwell
Mr. IZard
Mr. Forsythe

Dust Collector

(11)

6/2/50
700
880

Discharge duct is 14" i.d.

To convert ft^3/min to ft/min multiply by:

$$\left(\frac{14}{12}\right)^2 \frac{\pi}{4} = 1.07$$

For $1200 \text{ ft}^3/\text{min}$, $\frac{1200}{1.07} = 1120 \text{ ft}/\text{min}$

15-38 Adjusting damper wide open:

$$4 \times 687 = 2750 \text{ ft}/\text{min}$$

$$\frac{1}{2} \text{ open} \\ 2 \times 879 = 1780 \text{ ft}/\text{min}$$

$$\frac{1}{4} \text{ open} \\ 2 \times 439 = 880 \text{ ft}/\text{min}$$

$$\frac{3}{8} \text{ open} \\ 2 \times 550 = 1100 \text{ ft}/\text{min} \\ \text{or } 1180 \text{ ft}^3/\text{min}$$

Scrubbing Tower for Smelter Gases 4/2/50
D. G. G. ①

12-8-37

Weight of Tower Basis: One foot of packed height.
 Assume packing is 30#/ft.³
 ② tower is made of $\frac{1}{4}$ " sheet with angles bent around the tower to form flanges

Tower Diam. ft	length of sheet	weight of sheet	ft ³ volume of packing	weight of packing	total #
2	6.28	61.2	3.14	157	218
3	9.42	91.8	7.08	354	446
4	12.58	121.4	12.60	630	751
5	15.70	153.0	19.60	980	1133

wt/foot of 1 foot $\frac{1}{4}$ " steel sheet = $1 \times 1 \times \frac{2.5}{12} \times 7.5 \times 62.4 = 9.75$ #

Assume tower has an equivalent packed height of 7'. (6' of packing + liquid + gas inlets & outlets).

Tower Diam.	Total Weight #
2	1530
3	3120
4	5260
5	7950

Scrubbing Tower

12-8-37 $\frac{11}{20}$ 2

Assume a diameter of 3':

$$\text{allowable gas rate} = \frac{\pi \cdot 3^2 \cdot 1}{4} = 7.1 \text{ ft}^3/\text{sec} \\ = 425 \text{ ft}^3/\text{min}$$

Circulate water at the rate of 5 gpm/ft² C.S.

$$\text{or } 5 \cdot \frac{\pi}{4} \cdot 3^2 = 35.5 \text{ gpm} \\ = 4.25 \text{ gpm}$$

Assume gas enters at 200°C $\hat{=}$ 400°F

$$\text{heat/min above } 50^\circ\text{F} = \frac{425 \cdot 350 \cdot 0.25}{359} = 103.5$$

$$\text{If water were not recirculated, temp. rise} = \\ \frac{103.5}{35.5} = 2.9^\circ\text{F}$$

Assume $\frac{\text{tower diameter}}{\text{packing size}} > 8$ for proper distribution
size < 3.6"

use 3" Raschig rings

using graph in Sherwood p. 42, $F = 83\%$
 $u_0 = 1$ $S = 2.5 \text{ ft}^3/\text{ft}^3$ $u_0 \cdot S = 2.5$

$$\frac{u_0^2 S}{F^3} = \frac{1 \times 2.5}{0.475} = 5.27$$

$u_0 = 5$, or flooding at 600 gpm

from graph emp. 157, about 400 gpm,
so evidently gas flow could be increased to
600 ft³/min without danger
of flooding.

Scrubbing Tower

③
4/3/50
1000

Assume a diameter of 2':

Gross Rate = $\frac{\pi}{4} \cdot 2^2 \cdot 1 = 3.14 \text{ ft}^3/\text{sec}$
 $\approx 200 \text{ ft}^3/\text{min}$

Water Rate: $5 \text{ lbs/min/ft}^2 \text{ C.S.}$
 $\approx 2 \text{ gpm} \quad \frac{1.057 \cdot 60}{2.4} = 8 \frac{\text{secs}}{\text{ltr}}$

Packing: 2" Raschig rings

From Sherwood p. 133	Raschig rings dumped
2" x 2" Raschig rings	1" x 1"
35 #/ft ³	58 #/ft ³
14.4 sq. ft. surface per cu ft.	58 ft ² /ft ³
73% free volume	73% free volume
170 pieces/ft ³	1,350 pieces/ft ³

Volume of 2' x 6' tower = $2^2 \frac{\pi}{4} \cdot 6 = 18.85 \text{ ft}^3$

2" x 2" Raschig rings needed = $170 \times 18.85 = 3200$.

Made by U.S. Stoneware Co. Akron, Ohio
 160 rings/ft³; 41 #/ft³ (price probably about \$5/ft³)

Thorne has 3" spiral tile so use this:

$70 \times 18.85 =$	1300	lbs needed
$63 \times 18.85 =$	1200	rings needed
$7.48 \times 18.85 =$	135.0	gallons needed.

$\frac{\pi}{4} (2)^2 \cdot 6 =$

Scrubbing Tower

4/2/80 (4)

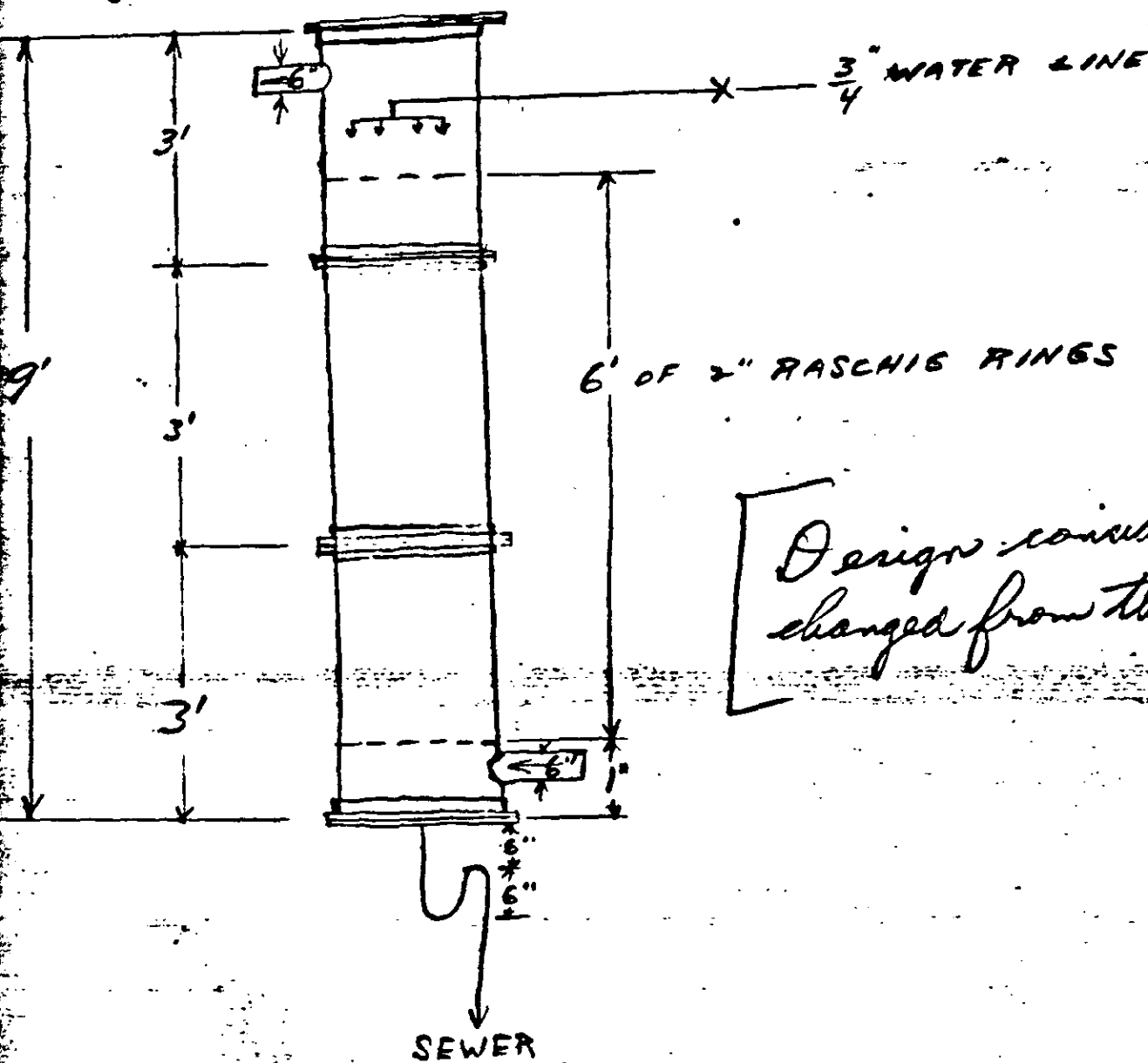
$$\text{Total gas flow} = 30 \times 60 \times \frac{\pi}{4} 3^2 = 12700 \text{ ft}^3/\text{min}$$

Scrubbing Tower

6/13/30 (3)
200

2' tower :

Tower is made of three circular sections of sheet steel with welded seams. A steel angle is welded to each end of each section to serve as a flange. Sections are to be bolted together with gasket joints. Total loaded weight about $\frac{3}{4}$ ton.

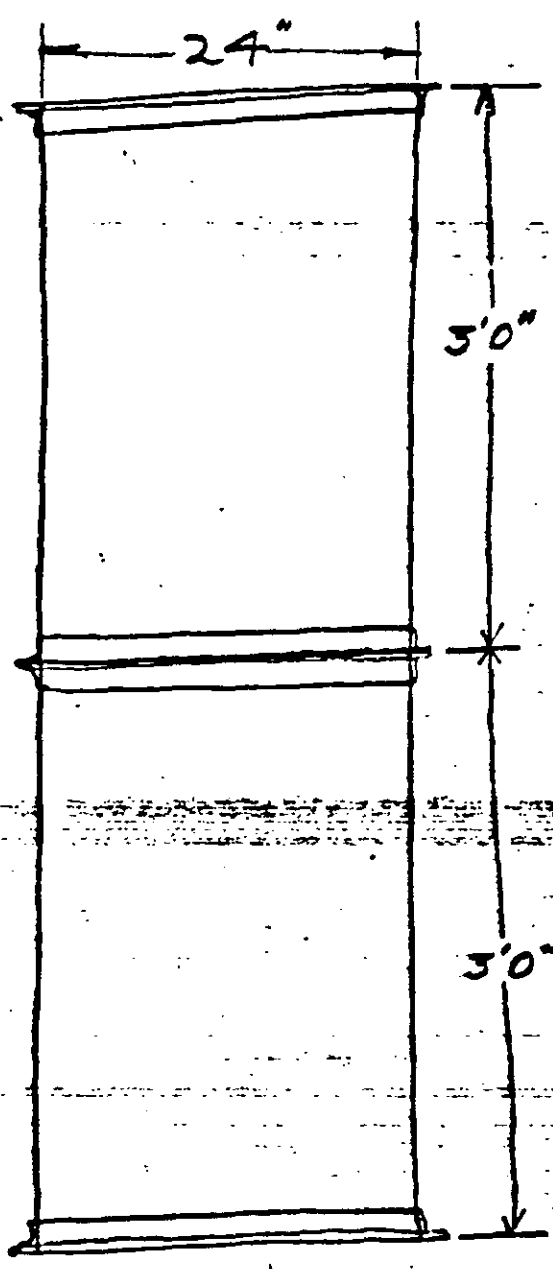


Design considerably
changed from this

1/1/50
90
210 (6)

FLUE GAS SCRUBBING TOWER

- CENTRAL SECTION -



CYLINDERS OF $\frac{1}{8}$ " SHEET STEEL WITH $\frac{1}{2}$ " ANGLES WELDED TO EACH END TO SERVE AS FLANGES.

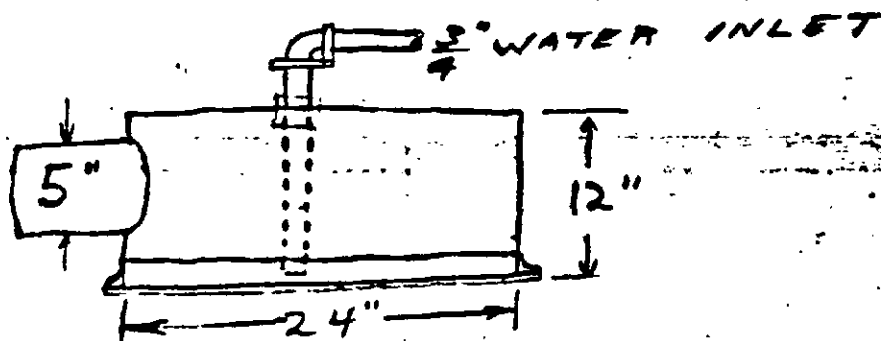
FLUE GAS SCRUBBING TOWER

7

- TOP SECTION -

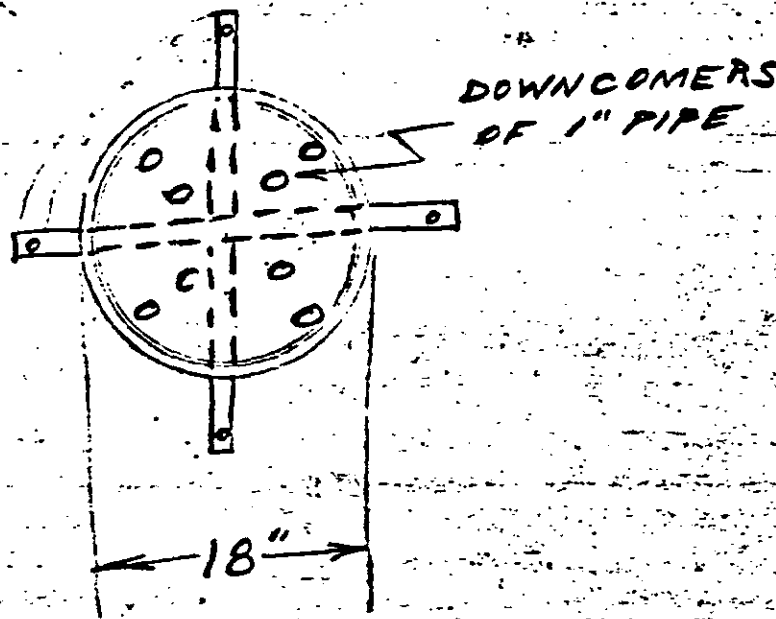
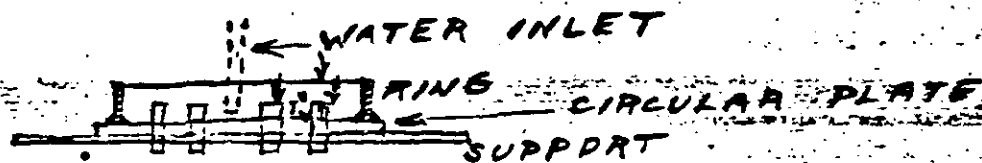
6/7/50
P. 670

[Discharge flue for 30' sec; (diam.) = $\frac{200}{60} \cdot \frac{1}{50} = \frac{4}{15} = 0.142'$
diam. = 0.377' = 4.5"]

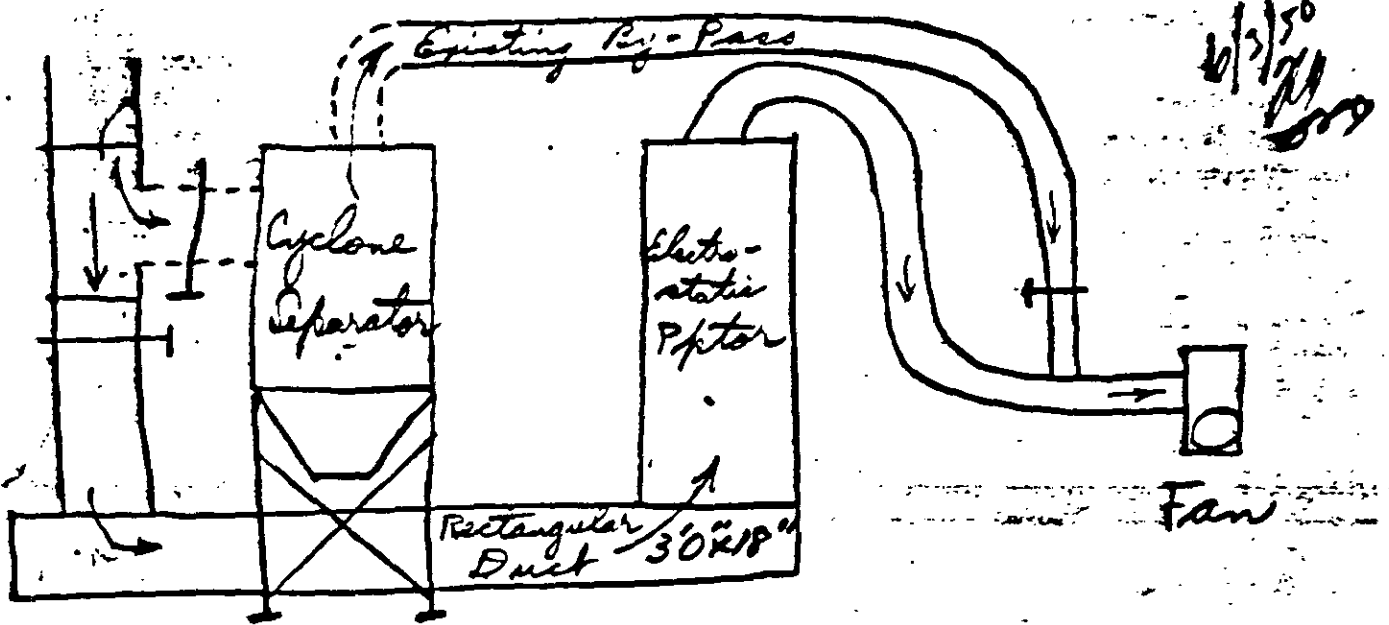


- DISTRIBUTOR -

[Reduce C.S. by $\frac{1}{2}$. Distributor diameter = $\sqrt{\frac{4}{\pi} \cdot \frac{1}{2} \cdot (2)^{\frac{3}{2}}} = 1.414' = 18"$



Installation of Cyclone Dust Separator



About 11' 6" from floor to eaves available for the separator. 3' 8" width available. Circular ducts 14" throughout.

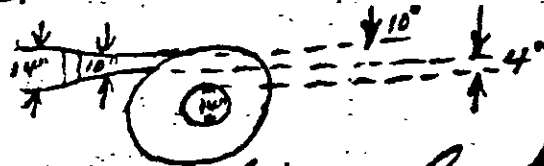
Old 5000 gal. dope circulating tanks are about 9 1/2' high by 4 3/4' diameter - too large.

Dust Collector from Bauer Catalogue:

Taper 14" duct to 10" intake (1/2" c.s.)

Collector 3' 6" diameter (42")

Outlet 14" diameter



Straight section about 30" high
Conical section about 5' high

Entering air velocity = $\frac{1200}{60} \times \frac{1}{\frac{120}{62.5} \times \frac{\pi}{4}} = 30.5 \text{ ft/sec}$

10
14
4
10
4 1/2
30
2 1/2
4
6 1/2
3
9 1/2

(9)

E. AND M. DEPT. COMPUTATIONS
EASTMAN KODAK COMPANY
KODAK PARK WORKS

BLDG. No. 110
COMPUTED BY H. J. Smith
DATE Jan 17, 1938
CHECKED BY _____
DATE _____
DRAWINGS _____

SUBJECT Stack Flow Bldg 110

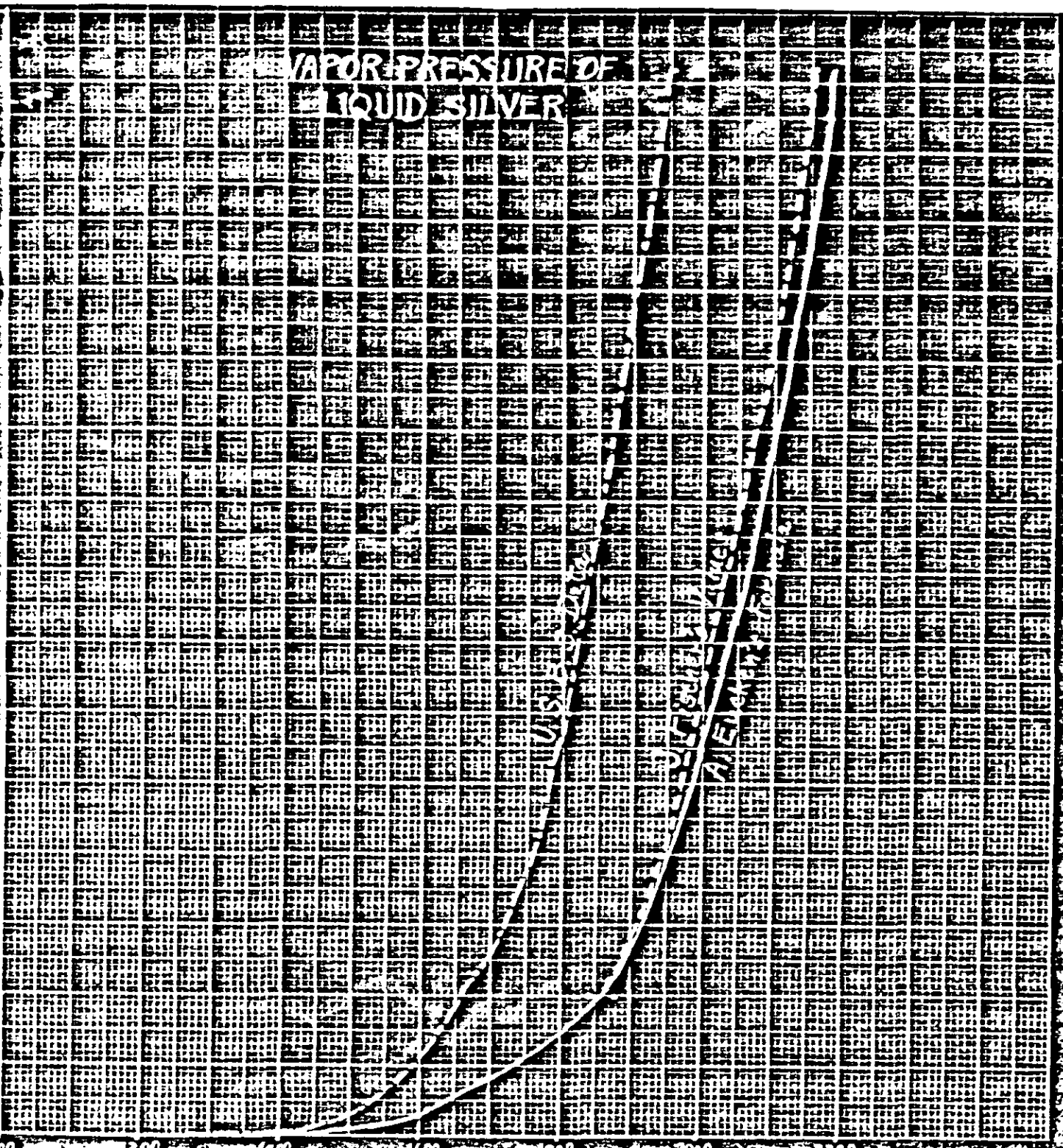
Measurement made Jan. 14, 1938 ^{11:15}
about 10 AM. _{6:00}
4 furnaces & melting furnace
operating.
Measurements by S. Poole & H. J. Smith
Stack Temperature = 130°C = 266°F.

Velocity of Gases	Volume at 130°C 266°F	Volume at 35°C 93°F	Volume at 15°C 59°F
52 ft/sec	368 ft ³ /sec	281 ft ³ /sec	26.3 ft ³ /sec
3120 ft/min	22,080 ft ³ /min	16860 ft ³ /min	15,780 ft ³ /min
187,200 ft/hr	1,324,800 ft ³ /hr	1,011,600 ft ³ /hr	946,800 ft ³ /hr

Flow through Electrostatic
Unit was 1130 ft³/min during
test 3:00 - 4:10 PM. 1-17-38

H. J. Smith

VAPOR PRESSURE OF LIQUID SILVER



Standard
Sept. 1920

CHEMICAL PLANT
KODAK PARK

(11)

4/2/50
1/20
570

October 23, 1940.

Mr. W. J. Reid, Bldg. 46:

Subject: Silver in Smelter Fumes

The smoke from the silver smelter at Bldg. 110 was sampled continuously by Mr. Millard and myself for several hours on October 16. Flue gases were drawn from the 36-inch flue duct through an Othmer bubble plate column (suggested by Mr. Millard) in which water was being recirculated, a 22-liter balloon flask, and a wet test meter. The flue gases were drawn through this apparatus at a rate of about 6 cubic feet per hour, through an orifice such that the rate and direction of flow into the orifice was the same as the rate and direction of flow through the flue duct.

At intervals of 15 minutes, samples were drawn from the 22-liter flask into an evacuated 5-liter flask, where the samples were shaken with a little water to absorb silver fumes, according to our old method of analysis.

During the testing on October 16, two gas-fired smelting furnaces were in operation, smelting O Waste with borax and slag, and silver was being melted in another furnace. The furnace gases were passing through the Traugher gas scrubber, but this was not in operation except for the exhaust fan in the top of the equipment - normal running conditions.

The following amounts of silver were accounted for when the samples were tested:

<u>Sample</u>	<u>Loss of Silver</u>
Solids deposited in tubes leading to the bubble plate column	0.13 troy oz. per hr.
Water recirculated through column	0.85 " " " "
Solids deposited in 22-liter flask and tubes from column to meter	<u>0.90</u> " " " "
Total silver acct. for in new apparatus	1.88 " " " "
Additional silver acct. for by old method of sampling	<u>1.76</u> " " " "
Total silver acct. for by both methods	3.62 " " " "

Mr. E. J. Reid — 2.

October 23, 1940.

6/2/50
JCN
219

It should be noted that this figure, 3.62 troy ounces per hour, does not represent the total loss of silver while the tests were being made. It did not seem practical to wait more than 12 minutes for each removal of gas from the 22-liter flask, by our old method. In each case, after this operation, it was necessary to let some air into the large flask; and 12 minutes was not sufficient to drive out all such air from the 22-liter (0.8 cu. ft.) flask, at the rate of continuous sampling, which was 1.2 cu. ft. in 12 minutes.

Conclusions

It appears that our complete new apparatus collected only 50% of the silver in the smelter fumes, while the water in the bubble plate column absorbed 45% of this silver, or 23% of the total silver which was accounted for.

The fact that our 22-liter flask collected more silver than the water, indicates that a great improvement could be made during cold weather, by placing such a large flask in the system ahead of the bubble plate column. On October 18 the temperature of the large flask was only about 50°F., so that there was much condensation, and a cloud of fog, in the flask.

Another improvement could be made by adding another Othner column of 4 bubble plates to the system. This would increase the resistance of the apparatus by about 7 inches of water, but the wet test meter would withstand this much additional vacuum. With both of these improvements it is likely that we could collect and measure at least 75% of the silver in a continuous automatic sample, during cold weather.

S. C. Pool

ECPool:EK

cc: to Mr. Kocher
Mr. Polwell
Mr. Izard and Mr. Allen
Mr. Davis
Mr. Millard ✓

C
CHEMICAL PLANT

KODAK PARK

September 9, 1940

(12)

6/3/50
210
213

Mr. M. J. Reid, Bldg. #46.

Subject: Vapor Pressure of Liquid Silver

The following formula for computing the vapor pressure of liquid silver has been published in Tables Annuelles de Constantes et Donnees Numeriques - No. 29, Tension de Vapeur, by E. P. Jorissen and P. C. van Keeken (1939):

$$\log p = \frac{-14,550}{T} + 10.18 - 0.27 \log T - .00017T$$

Investigation of the references given for this formula showed that it was derived from the following sources:

- J. Fischer, Z. anorg. allg. Chem., 219, 267-275 (1934).
- A. Eucken, Metallwirtschaft Wissenschaft Technik, 15, 27-32, 62-68 (Jan. 10 and 17, 1936).

A study of this literature showed that the logarithms were simply common ones to the base 10, that p was vapor pressure in millimeters of mercury, and that T referred to absolute temperature. The formula was derived from thermodynamic measurements. In the work published by J. Fischer it was found that he published a set of values for the vapor pressure of silver from 927° to 1151° C. At temperatures above 1800°C. these values are somewhat higher than corresponding vapor pressures calculated by the formula.

On account of our interest in losses of silver by volatilization, I have calculated a set of values for the vapor pressure of liquid silver and plotted them. In the accompanying graph, the solid line represents vapor pressure calculated according to the formula, and the broken line shows the values published by J. Fischer. A third line (- - - -) gives values which were published in 1936 in a circular of the U. S. Bureau of Standards C 412: "Silver, Its Properties and Industrial Uses." These values were originally published 21 to 29 years ago.

The following quotation from the Bureau of Standards circular, pp. 10-11, will also be of interest:

Mr. E. J. Reid, Bldg. #43 - 2

September 9, 1940

6/3/50
JCB
BYD

•Silver has an appreciable vapor pressure even in the solid state. Rosenhain and Even (J. Inst. Metals, 2, 149 - 172, 1912), who measured the loss in weight of small pieces of silver after exposure for various periods in vacuo at 870°C., concluded that fine-grained material lost weight more rapidly than coarse-grained. For example, after a 5-hour exposure a fine-grained strip of silver lost 0.0115 g./cm.², whereas a coarse-grained one lost only 0.0093 g./cm.².

As far as I know, there is no similar literature giving vapor pressure of silver halides. However, work done in our Laboratory (A. Barnes' report of August 17, 1937) has shown that the halides are much more volatile than metallic silver, so that they must be mixed with a reducing agent before they are smelted if large losses by volatilization are to be avoided.

S. C. Pool

SCPool:AM

Copy to Mr. Kocher
Mr. Folwell
Mr. Isard
Mr. Davis
Mr. Millard

(7)

American Blower Co. Cyclone 5-26-38

Gas into unit (0.326" Pitot reading at 164°F) from Forayth

$$u = c \sqrt{2g\Delta H}$$

let $\Delta H = 0.326$ "water = $0.326 \times \frac{62.4}{12} = 26.7$ fluid

$c = 1$

$u = \sqrt{32.2 \times 26.7} = 41.5$ ft/sec

or, in 8" x 8" duct, $41.5 \times \frac{8 \times 8}{144} \times 60 = 1110$ ft³/min @ 164°F

at std. cond. $1110 \times \frac{492}{624} = 876$ ft³/min

Gas at outlet (0.165" Pitot reading at 106°F)

$41.5 \sqrt{\frac{0.165}{0.326}} = 29.5$ ft/sec @ 106°F

or at std. cond. in a 1.07 ft² c.s. duct:

$29.5 \times 1.07 \times \frac{492}{566} \times 60 = 1650$ ft³/min

by anemometer 1780 ft³/min @ 106°F = 29.7 ft/sec

Gas just upstream from blanked bypass and fan (0.113" Pitot reading at 126°F)

$41.5 \sqrt{\frac{0.113}{0.326}} = 24.4$ ft/sec at 126°F

or at std. cond. in a 1.07 ft² duct:

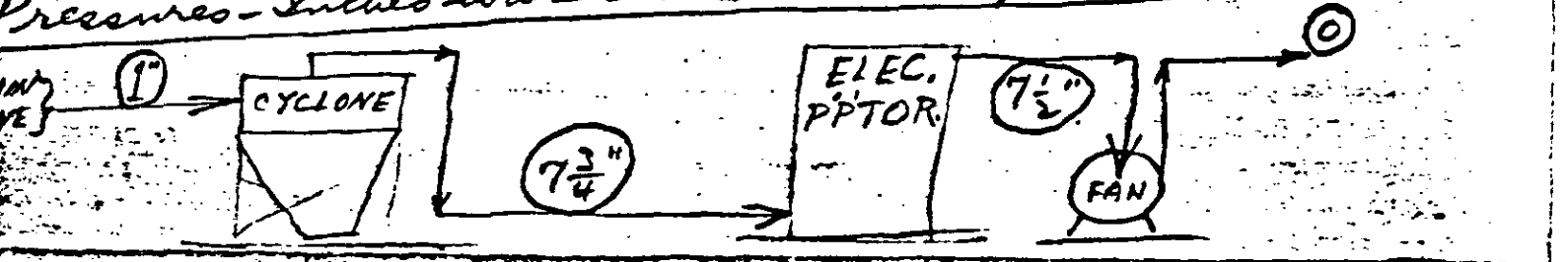
$24.4 \times 1.07 \times \frac{492}{586} \times 60 = 1310$ ft³/min

Static drop across cyclone separator

During Forayth run
6 3/4" 164°F in

(During sampling run, 5-27)
6 3/8"

Pressures - Inches water below atmospheric



(14)

Scrubber-Run #8

6/3/50
710
880

Sample as in run #7.
Spray operating in lower half of the scrubber.

Results:

Position	oz/hr	oz/hr (total flow)
1	0.0686	3.43
2	0.0396	1.98
3	0.0290	1.35

basis - One hour and total flow
Scrubber Precipitator

Silver removed	1.45	0.63
% of total	42	18
% of amount rec'd	42	32
Total % removed		60

	With Spray	Without Spray
% of silver rec'd which was removed by scrubber	42	57
% of silver rec'd which was removed by scrubber + precipitator	60	79

Scrubber Run #8

Water Discharge Silver Content

6/3/50
810
200

0.4 mg/5000 cc

$$\frac{\text{tray oz}}{100,000 \text{ gals}} = \frac{0.4 \times 10^{12}}{31} \times \frac{3800}{5000} = 0.98 \text{ oz Ag/100,000 gal}$$

Total Silver Removed

Basin - One hour total flow

$$0.98 \frac{5 \times 60 \times 50}{100,000} = 1.47 \text{ oz/hour}$$

by gas samples 1.45 oz/hour

Scrubber Run #7

Water Discharge Silver Content

$$\frac{0.5 \times 10^{12}}{31} \times \frac{3800}{8160} = 0.75 \text{ oz Ag/100,000 gals}$$

Total Silver - One hour and total flow

$$0.75 \frac{3 \times 60 \times 50}{100,000} = 0.68 \text{ oz Ag/hr}$$

by gas samples = 1.92 oz Ag/hr

Flue Gas Scrubber Run #6 3-27-38

6/3/50
280

Water Discharge:

$$\frac{0.5 \times 10^{+2}}{31} \frac{3800}{1735} = 3.53 \text{ oz Ag/100 000 gals.}$$

Rate of Discharge:

Water 0.91 gpm
Gas 395 cfm

On Total Flow:

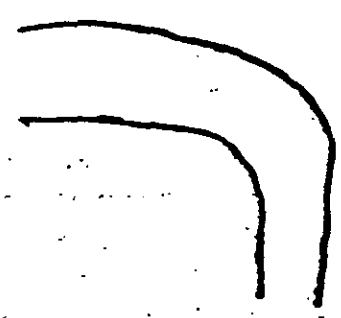
Silver in gas intake 9.62 oz/hr
Silver in gas discharge 8.47 oz/hr
Removed, by difference, 1.15 oz/hr in scrubber

Removed by water discharge assay:

$$\frac{0.91 \times 60 \times \frac{100}{100000} \times \frac{100}{2.6}}{31} \times 3.53 = 0.074 \text{ oz Ag/hr}$$

Removed by filter:

$$\frac{23}{31} \times 0.0172 \times \frac{100}{2.6} = 0.491 \text{ oz/hr}$$



Scrubber Run #7

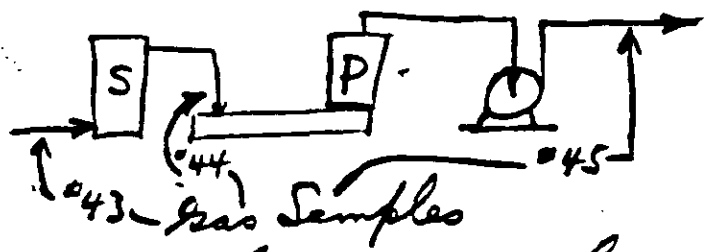
6/3/50
70
880

10:00-11:30 AM 4-7-38

Operating 2 scrubbers and the melter about one-half the time.

Air rate 320 ft³/min or 2.1% of total flow

Water rate 3 gpm



Gas Samples
Also took 1000 cc of scrubber water discharge/10 min.

Results:

#	oz/hr	oz/hr total
43	0.07	3.35
44	0.03	1.43
45	0.015	0.714

Basis - One hour total flow	Scrubber	Precipitator
Silver removed - oz	1.92	0.72
% of total	57	27
% of amount rec'd	57	50
Total % removed	79	

Silver removed in scrubber by water discharge assay:
oz on total flow basis = $3 \times 60 \frac{6}{8160} \times \frac{4}{1000} \times \frac{1}{31} \times \frac{100}{10} = 0.068 \text{ oz/hr}$

Ag concentration in water:
0.5 mg in 8160 cc
or $\frac{5 \times 10^{-4}}{31} \times \frac{3800}{8160} \times 10^5 = 0.75 \times 10^1 \text{ oz/100,000 gallons}$

Flue Gas Scrubber, Run #3

3-11-38

Discharge:

$$\frac{\text{tr. of Ag}}{100,000 \text{ gals}} = \frac{1.08 \times 10^{-4}}{31} \times \frac{3800}{2630} \times 1 \times 10^5 = 0.503 \text{ oz}/100,000 \text{ gals}$$

Assay - 0.108 mg Ag / 2630 cc 6/3/50
 6/10
 6/20

Rate of Discharge

$$\frac{\text{gals}}{\text{min}} = \frac{1}{14} = 4.3 \text{ gals/min}$$

Total Discharge

$$4.3 \times 60 = 258 \text{ gallons}$$

Total Silver Removed (Basis of Total Flow)

$$258 \times \frac{0.503}{100,000} \times \frac{100}{2} = 0.0650 \text{ oz/hr}$$

Discharge Gas

1.3 oz Ag/hr on basis of total flow

Run #5

3-22-38

6/2/50
90
850

Water Discharge 1.21 oz Ag / 100 000 gallons

Rate of Discharge

Water $2 \times \frac{30}{60} = 1.00 \text{ gpm}$

Air 252 ppm (1.7%)

On total flow:

Silver in air discharge

$$0.034 \frac{100}{1.7} = 2.0 \text{ oz/hr}$$

Silver in water discharge

$$\frac{1.21 \cdot 60 \cdot \frac{100}{100000}}{1.7} = 0.0427 \text{ oz/hr}$$

Flue Gas Scrubber - Run # 4, 3-15-38

6/3/50
20
519

Water Discharge

assay - 0.5 mg Ag. / 2730 cc

or $\frac{5 \times 10^{-1} \times 10^{-3}}{31} \times \frac{3800}{2730} \times 10^5 = 0.225 \times 10^1$
 $= 2.25 \text{ oz Ag per } 100,000 \text{ gals}$

Rate of Discharge

Water - $\frac{1}{25} \times 60 = 2.4 \text{ gals per min.}$

Air - 500 cu. ft. per min. = 3.2% of total

Silver in Air Discharge

$\frac{0.36}{0.032} = 11.3 \text{ oz/hour (on total flow)}$

Silver in Water Discharge

$2.25 \frac{2.4 \times 60}{100,000} = 0.00324 \text{ oz/hour}$
 $0.00324 \frac{1}{0.032} = 0.10 \text{ oz/hr (on total flow)}$

(21)

Discharge from Water Scrubber Run #2

6/2/50
910
800

Colorimetric Analysis:

$$\frac{\text{ounces}}{100,000 \text{ gals}} = \frac{9.7 \times 10^{-4}}{31} (1 \times 10^5) \frac{3800}{2700} = 3.5 \frac{\text{ounces}}{100,000 \text{ gals}}$$

[by assay 2.1 oz/100 Mgals]

Rate of Discharge:

$$\frac{\text{gals}}{\text{min}} = \frac{1}{\frac{38}{60}} = 1.58 \text{ gals. per min.}$$

Total Discharge:

$$1.58 \times 105 = 166 \text{ gallons}$$

Percentage of Total Flow if Gas Used

$$\frac{317}{1200} \times 8 = 2\%$$

Silver Removed on Basis of Total Flow:

$$\frac{3.5}{100,000} \times 166 \times \frac{100}{2} = 0.29 \text{ ounces/hour}$$

[0.23 oz/hr by assay]

Silver in Gas Stream Leaving Scrubber:

(basis of total flow) 2 1/2 ounces per hour

Silver in Gas Stream Leaving Precipitator:

(basis of total flow) 2 ounces per hour

Test on Smelting Flue Gas Scrubber 3-4-38

Run #1

6/2/56

85
88

Scrubber and electrostatic precipitator in series. One smelter and the melter were operating. Ran test for 105 minutes and collected a composite sample of water discharged during this time. During the first 50 minutes the sample was sampled after the precipitator, during the last 45 minutes it was sampled between the scrubber and the precipitator.

Data:

Gas flow - 317 ft³/min or 2% of the total

Scrubber water rate - 1.6 gallons/minute

Results:

(Based on Total Flow)

Silver removed by scrubber 0.23 oz/hour

Silver removed by precipitator 1/2 oz/hour

Silver in gas stream leaving scrubber 2 1/2 oz/hour

Silver in gas stream leaving precipitator 2 oz/hour

SAC

SA William H. Naylor

June 7, 1950

HARRY GOLD, was;
ESPIONAGE - R

GOLD RESIDENCE SEARCH MATERIAL

Exhibit: 65-4307-1-B-5(2)

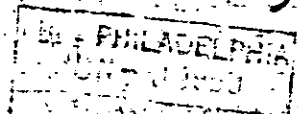
Reference: Search Memo, June 5, 1950, Page 16

Description: Air mail envelope from D. GREEN, 311 South Witmer, Los Angeles, 13, Calif., directed to HARRY GOLD, 48-53 44th Street, Woodside, Long Island, N.Y., care of LEVINE. This envelope was postmarked Los Angeles, Calif., March 18, 1948. The envelope contained a letter, dated March 17, 1948, addressed "Dear HARRY" and signed DOOLY (Ph) and LIL. The letter is of a personal nature regarding the writers' experiences in California and it appears that they previously resided in a New York apartment taken over by HARRY.

Possible Leads: Information should be obtained from GOLD as to the identity of the GREENS and data regarding his association with them.

JFM WHN/jfm
65-4307

65-4307-1B-5(2)



SAC

SA T. SCOTT MILLER, JR.

6/27/50

HARRY GOLD, WAS.
ESPIONAGE - R

65-4307-1-B-5 (2)

This exhibit, consisting of a letter mailed to GOLD from D. GREEN, 311 South Witmer Street, Los Angeles, California, was exhibited to GOLD on 6/20/50.

GOLD identified the writer as being DOROTHY GREEN and stated that he had rented an apartment from her on 44th Street in Woodside, L. I. while he was employed by BROTHMAN in New York. GOLD said that he got in contact with GREEN through GOLD's fellow employee, PHILIP LEVINE. GOLD said that GREEN and her friend LILLIAN went to Los Angeles during the time that GOLD was a tenant in that house.

This letter refers to GOLD's relationship with GREEN in their capacity of landlord and tenant.

tam/rac
65-4307

D. Green
311 S. Witmer St.
Los Angeles 13
Cal.

LOS ANGELES
MAR 18
11 AM
1948
CALIF.



VIA AIR MAIL

*6/2/50
L. Green*

Mr. Harry Gold
48-53-44th Street
Woodside
Long Island
New York

c/o Levine

March 17, 1948

Dear Harry,

The "Top of the morning to you" - it being St. Patrick's day out here, too ---

We had an idea we might have a letter from you by now, but perhaps we didn't give you our permanent address - acquired by hook and by crook - as the custom is out here, unfortunately.

Now we are the possessors of an apartment, two whole rooms and bath, the second room being a real kitchen - but the whole shebang would fit into your place, and you still have more closet space than we have. Also this place has no charm at all, it just sits there and defies us to make it homey and attractive, and thus far it has won the battle.

However, our idea of finding a business out here is still on our minds, and we hope to locate eventually outside of the city - L.A. is just an overgrown hick town - altho it does have some great beauty, particularly the surrounding mountains which are visible from many streets and make it hard for one to realize that one is actually living in a large city.

This has been an expensive experiment - everything but food is very high - city taxes, license plates, etc., drain the last cent out of you, and the little difference in food prices is not too noticeable on the overall picture.

We note with sorrow that P.M. is about to close up - it is a sad commentary on things that even in New York City a paper like this gets a kicking around. Out here the papers are pretty bad - I don't know one from the other yet - except one belongs to Hearst and looks like the Journal American, the other looks like a couple of other fellows, the third like a tabloid, and they all sound alike.

Lil has a temporary job, not good, but a better one will be forthcoming no doubt, and in the meantime I am trying to get the dope on this town, state, and surrounding places.

We know from our friends and families that the winter has been unbearable, and with all our troubles and worries we consider ourselves lucky to have escaped it - it has been cooler here than usual, but compared to what we are used to it has been heavenly - even the fact that there has been no rain has benefitted us, altho we, like pious Californians are really hoping for some good, long, heavy rains before the possibility of them is entirely passed. If we don't get it, it will mean oranges at a dollar a piece for you next season, or none at all!

Drop us a line if you have the time - and remember us to the Levines, whom we shall write to soon - if your affairs have improved, which we hope, we would appreciate the balance of the money for the household effects - \$33. - I think it was - we are not in dire straits by any means, but when I tell you that our license plates for the Jeep set us back \$30., you will see what I mean by unusual expenses incurred in this town, not to mention a three cent sales tax on everything.

With best regards from both of us

Dorothy Hill

P.S. You might take an affectionate look around your apartment for us - we loved that place, - and were probably out of our minds to leave it - but the die is cast, and we will continue to chase our rainbow out here - maybe this is where it ends, this is the golden state, you know.

311 B. Witmer St.,
Los Angeles 13
Cal.

*hee
and
05/2/9*

UNITED STATES ARMY

Sept. 23rd 1942

Dear Harry.

Well pal I'm in the Army you and I don't mean maybe. of all the places to send me, is here in New Mexico. It's pretty swell down here though and plenty tough, but I don't mind it a bit. It will probably put me in shape and I need it. We drill 3 or 4 hrs. a day besides all our inspections and I mean I am kept pretty busy, so you can understand I don't have much time for writing. When we are finished for the day all we want to do is to take a shower and get that tank. Harry I don't believe we get paid before the latter part of October (not till my dear wife hears that) and I hope I can send you something on account. I wrote the tank a letter as soon as I arrived and I explained the situation and I sure hope they understand. How is that red headed piece doing, is he still trying to make something of you? Tell him I will write him later. If I tried to write another letter now, no kidding I think my hand would break. Well pal I guess I will have to close as the lights here go out at 9⁰⁰pm and we get thrown out at 5³⁰pm. If you don't hear from me for a while please write any - how because I will be pretty busy for the next 2 or 3 weeks.
So long Pal
O.S. Murphy.

65-4307-1-B-5 (3)

Post Wm. J. Murphy
Det. 14-853rd Ord. Gen. Co. Avn.
Roswell, New Mexico



Mr. Harry Gold
5032 N. Bovidart St.
Phila
Pa

1307-11-B-5 (4)

John Burrows

Johnnie Helen
Cunningham
April 24 1951

SAC

June 7, 1950

ALBERT L. PIERCE, SA

HARRY GOLD, WAS.
ESPIONAGE - R

ANALYSIS OF GOLD RESIDENCE SEARCH MATERIAL

Exhibit #65-4307-1B-5 (4)

Re search memo of SA (A) ELWOOD A. PETT 6-5-50, page 16.

DESCRIPTION:

A Manila folder containing five handwritten sheets of notes believed to be in the handwriting of HARRY GOLD. The first two sheets mention a meeting with AL, believed to be AL SLACK, regarding material furnished to GOLD by AL which was "left to him by Dick for use by a person identifying himself to Howard." The Dick is unknown, but the Howard is believed to be HOWARD GOCHINAUR, a contact of AL SLACK. Other references to HOWARD are made. The last three sheets appear to be reports on industrial chemical processes. Readable copies of these sheets have been typed and are attached to this memorandum. An extra copy is attached to the individual sheets in the exhibit.

LEAD:

Will exhibit this material to HARRY GOLD for his interpretation regarding its connection with this case and in the case of AL SLACK and HOWARD. Will also attempt to determine the identity of DICK.

ALP:MEMcG

65-4307

cc: 65-4333 (AL SLACK)

Item #4

(2)

The copy is in AL's printing and was made by him at night in the plant. He had the use of this material for only a few days to facilitate some work he was doing. Therefore while he had the opportunity, he obtained the info for us. All of the non-tech and most of the technical men at the plant are given materials to work with which are only identified by these code numbers. The above material is in place of the write up on A.G. recovery which he had said he would have. *Silver* AL says that he took and copied the code numbers instead because he never knew he would again have such a chance.

I told AL that we were very interested in the manufacture of nylon and wanted a completely detailed description of the process; theory; raw materials; flow sheet; operating details; description and drawings of equipment and all chemical and physical data. He is going to see HOWARD on Saturday, December 6, and I shall see AL on Sunday, December 7. AL says that since HOWARD works right in the production department he should have

REO:HEF
65-1307

(1)

Item #4

(2)

The copy is in AL's printing and was made by him at night in the plant. He had the use of this material for only a few days to facilitate some work he was doing. Therefore while he had the opportunity, he obtained the info for us. All of the non-tech and most of the technical men at the plant are given materials to work with which are only identified by these code numbers. The above material is in place of the write up on A.G. recovery which he had said he would have. AL says that he took and copied the code numbers instead because he never know he would again have such a chance.

silver

I told AL that we were very interested in the manufacture of nylon and wanted a completely detailed description of the process; theory; raw materials; flow sheet; operating details; description and drawings of equipment and all chemical and physical data. He is going to see HOWARD on Saturday, December 6, and I shall see AL on Sunday, December 7. AL says that since HOWARD works right in the production department he should have

RHO:HKF
65-1307

The copy is in his ^{own} handwriting & was made by him at work in the plant. He had the use of this ^{entire} material for a few days to facilitate some work he was doing; ~~and~~ ^{therefore}, while he had the opportunity, ~~made~~ he obtained the info for us all of the non-tech & most of the technical men at the plant ~~and~~ are given ~~material~~ ^{material} which he used to work with which are only a date filed by these code nos. The above material is in place of the writings on a memory which he ~~promised~~ ^{had said he would} have. Al says that he took ~~the~~ ^{initial} ~~copy~~ ^{copy} because he never knew when it would again have such a chance.

6/3/50
JLB
STB

~~For the information~~
I told Al that we were very interested in the amount of nylon & ~~would~~ ^{would} want a completely detailed ^{analysis} ~~description~~ of the process; raw materials; flow sheet, operating details, description & drawings of equipment, & all chemical & physical data. He is going to see Howard on Sat p.m. 6. & I shall see Al on Sun p.m. 7. Al says Howard works right in the

Item #4

(1)

I met AL at 8:20 p.m. We were together for 1½ hours and talked business. He had with him (and I submit) the following materials:

- 1) The material left to him by DICK for use by a person identifying himself to HOWARD. This consists of:
 - a) A description of the complete process for the synthesis of adipic acid (one of the basic intermediates for the manufacture of nylon) from hexalin.
 - b) Two blueprints. One is a very poor reproduction and the other is much tattered. These were most likely used not for their value as information but by anyone who would go to meet HOWARD.
- 2) A copy made by AL of the code numbers and the corresponding materials and chemical compounds used by E.E. (or C.E.).

(2)

RID:HKY
65-1307

Item #4

(8:30)

(1)

had only time to talk

I met AL at 8:20 p.m. We were together for 1 1/2 hours and talked business. He had with him, (and I submit) the following materials:

- 1) The material left to him by DICE for use by a person identifying himself to HOWARD. This consists of: *Adipic acid*
74 penicillin
 - a) A description of the complete process for the synthesis of adipic acid (one of the basic intermediates for the manufacture of nylon) from hexalin.
 - b) Two blueprints. One is a very poor reproduction and the other is much tattered. These were most likely used not for their value as information but by anyone who would go to meet HOWARD.
- 2) A copy made by AL of the code numbers and the corresponding materials and chemical compounds used by E.K. (~~or~~ *or* ~~over~~).

RID:HEP
65-1307

Item #4

(1)

Design report covering ^{design} drug H-189

Statement of Problem

Design an agitated vessel to mix a resin solu. and a diluent continuously, the assembly to be fabricated of 18:8 stainless steel with Cb. stabilized members being used for all welded parts. The resin solu. is to have a specific gravity of 0.8. The viscosity of the resin solu. is 500 centipoise, the viscosity of the diluent about that of water while the viscosity of the final product is 150 centipoise.

Method of Design and Summary of Calculations

Two separate approaches to the problem are covered in our ^{Proposed} appraisal.

- (1) The first alternative is based on the use of a curved-vane turbine type mixer working at a speed as per below and provided with a number of radial baffle plates to deflect the ~~GENERAL~~ delivery of the turbine so as to prevent swirling of the "mix."
- (2) The second alternative is based on the use of a curved-vane turbine rotor working in a rotor-stator relationship with an overhanging and an underhanging plate and provided with

③

RCH:HKP
65-1307

Design for covering Dwg. 170-189 1/21/50
720
000

Statement of Work:-

Design an agitated vessel to mix a resin soln. & a diluent continuously, the assembly to be fabricated of 18:8 stainless steel with all stainless members being used for all welded parts. The resin soln. is to have a specific gravity of 0.9. The viscosity of the resin soln. is 500 centipoises, the viscosity of the diluent about that of water, while the viscosity of the final product is 450 centipoises.

Method of Design & Summary of Columns:-

Two separate approaches to the problem are covered in our proposal:-

The first alternative is based on the use of a curved-vane turbine type mixer working at a speed as per below & provided with a no. of radial baffle plates to deflect the tangential delivery of the turbine ~~as to prevent~~ as to prevent swirling of the mix.

The second alt. is based on the use of a curved-vane turbine type mixer in a rotor-stator relationship with an ~~in~~ an underhanging plate, at a

Item 4

(2)

baffle plates to ^{INHIBIT} ~~exclude~~ swirling and a draft-tube for the purposes named below. The advantages of the second alternate design are:

- 1) In consequence of the rib members with which the overhanging and underhanging stator plates are provided (see page 10 of the enclosed bulletin) there is developed between the rotor blades and the stator ribs a direct mechanical action on the circulated charge which tends to "chop" one component of a mixture into the other. The mixing action which is thus exerted combines the direct mechanical action thus achieved with the condition of turbulence which is created as a ~~feature~~ ^{function} of the circulating capacity of the turbine. This type of assembly used in problems involving the setting-up of ~~settling~~ of solids, the thinning and blending of viscous materials -- in fact, any problem involving the blending of materials differing widely in viscosity or the diffusion of large ~~size~~ solids in liquids -- has effected savings in time varying from 10% to 50% over results achieved by normal type turbines.

RGH:HKV
65-1307

(4)

6. The plates to inhibit swirling, & a draft tube
for the purposes named below. 6/3/50
JLB
JRO

The advantages of the decoupled alternate
design are:—

1. In consequence of the rib members
with which the overlapping & underlapping
stator plates are provided (see page 10 of the
enclosed bulletin), there is developed bet. the
rotor blades & the stator ribs a direct
mechanical action on the circulated
charge which tends to "chop" and compartment
of a mix into the other. The mixing action
which is thus exerted combines the direct
mechanical action thus achieved with
the condition of turbulence which is created as
a function of the circulating capacity of the turbine.
This type of assembly need no problems

involving the setting up of solids of solids,
the thinning & blending of viscous materials

--- in fact, any prob. involving the blending
of materials differing widely in viscosity or the
diffusion of low viscosity solids in liquids ---
--- which are in time varying from 10% to

Item #4

(1)

The use of the subject type of assembly in the subject case should increase the through-put capacity of the units and assure the complete uniformity of the final product stream.

- 2) In consequence of the use of the perforated muffling cage, there is developed a second zone of direct mechanical action on the circulated charge between the turbine blade tips and the cage, thus tending to further assure the uniformity of the product stream and increase the through-put capacity of the units.

RHO:HEP
65-1307

(5)

①

The use of the direct type of air body in the
subject case should increase the through-put
capacity of the units & assure the complete
uniformity of the final product stream.

6/13/50
JGP
JDS

In consequence of the use of the perforated
supply case, there ~~is~~ developed a second
zone of direct mechanical action on the
circulated charge between the turbine blade
tips of the case, thus tending to further assure
the uniformity of the product stream &
increase the through-put capacity of the
units.

65-4307-1-B-5(7)



SAVE THE EASY
BUY U.S. BONDS
PAYROLL SAVINGS



Mr. Harry Gold
6823 Hindred St.
Philadelphia 24, Pa.

50 #1

SAC

7/23/50

SA RICHARD E. BRENNAN

HARRY GOLD
ESPIONAGE - R

Exhibit 65-4307-1-B-5(8)

This exhibit, consisting of a piece of white paper with certain penciled writing, was exhibited to GOLD on June 19, 1950.

GOLD said that the notation "All R&D Dept." and the two names appearing afterwards, CAPALA and SINN, refer to individuals at the Quartermaster Depot, Philadelphia, Pa. GOLD said that his brother, JOSEPH, gave him these names at one time in the event that GOLD would be anxious to obtain a civil service position at the Quartermaster Depot. GOLD said that he never applied for this position.

REB:DNH
65-4307

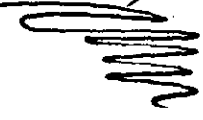
65-4307-1B5(8)

C

O

1 all R & D Dept 1

xxx
Mr Theodore Kapala
Head of the Acceptance Lab.



Dr. Liu
Head of Biological Lab.

eat 6/3/50
#8

SAC

7/13/50

SA RICHARD E. BRENNAN

HARRY GOLD
ESPIONAGE - R

Exhibit 65-4307-1-B-5(9)

This exhibit, consisting of a scrap of paper, probably paper hand towel, was exhibited to GOLD on June 19, 1950.

GOLD said that Dr. MYERS, whose name appears on this paper, called GOLD some months ago when MYERS was in Philadelphia. GOLD said that MYERS operates the Myers Clinic Hospital at Philippi, West Virginia, and was concerned with hiring a chemist for the hospital. GOLD said that one of MYERS' relatives was an interne at Philadelphia General Hospital and had given MYERS GOLD's name and telephone number.

REB:DMH
65-4307

SEARCHED _____	INDEXED _____
SERIALIZED _____	FILED _____
JUL 20 1950	
FBI - PHILADELPHIA	

65-4307-1-B-5(9)

Dr. E. C. Messers
mylar clinic shoes
Phillippi, W. Va.

Flame
Electrology
Polarographic
clinic shoes

49
Est 6/3/50

LT
Mr C-L. Bachman
Naval Air Dep't. STA
Hatboro 0700

J. Horan armament lab.

call of my child is from
mine & taking art.

Art the children know
v

65-4307-1B5 (10)

SAC

7/23/50

SA RICHARD E. BRENNAN

HARRY GOLD
ESPIONAGE - R

Exhibit 65-4307-3-B-5(11)

This exhibit, consisting of an envelope and letter from THEO. B. KROUSE, Lt. (jg), U. S. Naval Hospital, Philadelphia, Pa., was exhibited to GOLD on June 19, 1950.

GOLD said that KROUSE had been an interne in Philadelphia General Hospital where GOLD worked and GOLD knew KROUSE through their association at the hospital.

GOLD also said that the photograph referred to in the letter was one which KROUSE had taken of GOLD in the hospital.

REB:DWH
65-4307

65-4307-3-B-5(11)

Friday August 19-

Dear Harry:

Enclosed you will find that photo taken of you working at one gadgetry in your lab. I trust that it sufficiently conveys the weary countenance that you carry - while probing the frontier of the $R +$

Hope to see you soon when I get to P.G.H. for dinner - 'Til then. Keep the faith!

friend

Ted.

rec'd 4/15/50

Thea B. Krouse LT(J.G.)
% U.S. Naval Hospital
Philadelphia (45) Pa.



Mr. Harry Gold
% Metabolic Laboratory
Philadelphia General Hospital
Phila. (4), Pa.

65-4307-1-B-5 (12)

In notebook of
Wegold.
W.C. # 12
6/3/50

weise Umsetzung unter Verflüssigung und Gelbfärbung. Die Bombe wird 8 Stdn. auf 110° erhitzt. Nach dem Erkalten befindet sich in der Bombe neben Natriumchlorid ein citronengelbes, zähflüssiges Öl, das langsam kristallisiert. Der Inhalt wird mit warmem Benzol ausgezogen, und die gelbe Benzol-Lösung im Vakuum eingeeengt. Aus der konz. Lösung scheidet sich der Sulfantimonigsäure-phenylester in großen, hellgelben Krystallen aus. Ausbeute 90%. Schmp. $70-71^{\circ}$. Löslich in Äther, Benzol, Schwefelkohlenstoff, schwer löslich in Alkohol. Wird an der Luft in ätherischer und alkoholischer Lösung schnell, in benzolischer Lösung langsamer oxydiert unter Abscheidung von Antimonoxyd und Diphenyldisulfid.

4.474 mg Sbst.: 7.90 mg CO_2 , 1.40 mg H_2O . — 8.931 mg Sbst.: 14.10 mg BaSO_4 .

$\text{C}_{17}\text{H}_{15}\text{S}_2\text{Sb}$ (449.1). Ber. C 48.09, H 3.37, S 21.42.

Geft. 48.16, 3.50, 21.68.

Sulfantimonigsäure-benzylester, $(\text{C}_6\text{H}_5\text{CH}_2)_2\text{S}_2\text{Sb}$ (VII)

0.3 Mol Natrium-benzylmercaptid und etwas weniger als 0.1 Mol gepulvertes Antimon(III)-chlorid werden in abwechselnden Schichten in eine Bombe gefüllt. Bereits in der Kälte beginnt die Umsetzung unter Selbsterwärmung, Dunkelfärbung und teilweiser Verflüssigung. Die Bombe wird 11 Stdn. auf 90° erwärmt. Nach dem Erkalten wird der schwarze, halb feste Inhalt mit absol. Äther ausgezogen. Der in Äther unlösliche Rückstand besteht aus Natriumchlorid und Antimon. Nach dem Eindampfen der dunkelbraunen, ätherischen Lösung auf dem Wasserbade bleibt ein dunkelbraunes Öl zurück, aus welchem sich beim Stehen im Kühlschrank im Laufe einer Woche 30 g Dibenzylsulfid ausscheiden. Das nach dem Absaugen des Disulfids bleibende Öl ist halogenfrei. Es ist auch im Hochvakuum nicht unzersetzt destillierbar, sondern es zerfällt von 100° ab unter Bildung von Dibenzylsulfid, Dibenzyldisulfid und Abscheidung von fein verteiltem Antimon. Die Analyse des von Dibenzylsulfid nicht vollkommen zu reinigenden Öles ergab:

44.70 mg Sbst.: 85.1 mg CO_2 , 18.75 mg H_2O . — 134.6 mg Sbst.: 195.5 mg BaSO_4 , 340.2 mg Sbst.: 114.9 mg Sb_2S_3 .

$\text{C}_{21}\text{H}_{17}\text{S}_2\text{Sb}$ (491.2). Ber. C 51.34, H 4.31, S 19.38, Sb 24.79.

Geft. 51.92, 4.69, 19.95, 24.20.

Sulfantimonigsäure-*p*-Tolylester, $(\text{CH}_3\text{C}_6\text{H}_4)_2\text{S}_2\text{Sb}$ (VIII)

In entsprechender Weise wie bei VII werden 0.3 Mol Natrium-thio-kresolat und etwas weniger als 0.1 Mol Antimon(III)-chlorid in der Bombe umgesetzt. Nach 10-stdg. Erwärmen auf 90° wird der Inhalt mit absol. Benzol ausgezogen. Aus der im Vakuum eingeeengten Lösung scheiden sich derbe, hellgelbe Krystalle des Esters aus. Schmp. 95° unt. Zers. Ausbeute 85%. Leicht löslich in Benzol, Äther und Schwefelkohlenstoff, löslich in Alkohol unter Zersetzung.

30.6 mg Sbst.: 57.5 mg CO_2 , 11.0 mg H_2O . — 404.0 mg Sbst.: 401.0 mg Sb.

$\text{C}_{11}\text{H}_9\text{S}_2\text{Sb}$ (491.2). Ber. C 51.34, H 4.31, Sb 24.79.

Geft. 51.25, 4.04, 25.00.

258. Oskar Zwecker: Die sterische Hinderung, ein Mittel zur Analyse innermolekularer Kräfte.

(Eingegangen am 3. Juni 1935.)

Die stereochemische Entwicklung muß es zum Schluß möglich machen, sämtliche Strukturformeln so in den Raum zu setzen, daß die Raumformeln in jedem einzelnen Fall die Abhängigkeit der Eigenschaften von dieser Lagerung abzulesen gestatten. Mit diesen Worten charakterisiert A. Werner die Bedeutung, die zur Erklärung der Eigenschaften der Moleküle der räumlichen Lagerung der Atome zugemessen wird. Dieses Ziel kann nur erreicht werden, wenn es gelingt, die gegenseitige Beeinflussung der Atome im Molekül eindeutig zu beschreiben. Es hat sich gezeigt, daß die Reaktionsfähigkeit eines Moleküls in außerordentlicher Weise mitbestimmt wird durch Substituenten, die an der Umsetzung nicht selbst direkt teilnehmen. Mit besonderer Deutlichkeit treten die Einflüsse zweiter Substituenten bei den aromatischen Verbindungen in Erscheinung. Mit den heutigen Mitteln ist es noch nicht möglich, die diesen Tatsachen zugrunde liegenden Zusammenhänge irgendwie theoretisch zu erfassen oder Voraussetzungen qualitativer oder quantitativer Natur zu machen.

Um die weitere Komplizierung durch die verschiedene Stellung der Substituenten im Benzolkern auszuschließen, soll im folgenden nur die Wirkung der *ortho*-Substituenten betrachtet werden. Die *o*-Substitution ist besonders charakteristisch und führt vielfach zur vollkommenen Unterdrückung einer Reaktion. (V. Meyer¹⁾ hat die sterische Hinderung im Falle der substituierten Benzoesäuren in folgender Weise formuliert: „Sobald in einer substituierten Benzoesäure die beiden der Carboxylgruppe benachbarten H-Atome durch Radikale, wie Cl, Br, J, NO₂, CH₃, Carboxyl, u. s. w. versetzt sind, resultiert eine Säure, welche durch Alkohol, Salzsäure nicht esterifiziert wird. Nur auf die beiden dem Carboxyl benachbarten Atome kommt es an.“

Nach V. Meyer ist die sterische Hinderung vor allem auf Ursachen räumlicher Art zurückzuführen. Dieser Verzicht auf eine Erklärung, die die spezifisch chemischen Eigenschaften des benachbarten Substituenten berücksichtigt, mag historisch darin begründet sein, daß im speziellen Fall der Benzoesäure durch Substituenten von sehr verschiedenem Habitus der gleiche Effekt ausgelöst wird. Doch zeigen sich schon wesentliche Unterschiede, wenn man Benzoesäuren betrachtet, die nur einfach in *o*-Stellung substituiert sind. So beeinflussen die Methylgruppe, die Halogene und die Nitrogruppe die Veresterungsgeschwindigkeit der Carboxylgruppe in sehr verschiedenem Ausmaß.

Es gibt viele Argumente, die gegen die Theorie von V. Meyer sprechen. Es ist schwierig, die Raum-Erfüllung bzw. die Wirkungs-Sphäre der Radikale zu definieren. (Es wurde gezeigt²⁾, daß das Volumen einzelner Atomgruppen keine konstante Größe ist, daß vielmehr für einzelne Atomgruppen verschiedene Inkremente erhalten werden, die abhängig sind von der Art der bereits vorhandenen Substituenten. Ferner ist es unklar, ob gefundene Inkremente das wirkliche Volumen oder Änderungen der innermolekularen Kräfte andeuten. Aber abgesehen hiervon ist in vielen Fällen der eindeutige Nach-

¹⁾ B. 27, 519 (1894); Ztschr. physikal. Chem. 449, 149.

²⁾ Stereochemie Wittig.

C_6H_5 (*p*-Oxy-benzalanilin) und $\text{C}_6\text{H}_4(\text{CH}_2\text{CH}(\text{NH}_2)\text{CO}_2\text{H})$ (Tyrosin), des gleichen Übergang des Benzol- zum Pyridinkern (2-Oxy-pyridin, 2-Diod-2-oxy-pyridin). Carboxyl wirkt meistens inaktivierend, besonders in *o*-Stellung (Salicylsäure, *m*- und *p*-Oxy-benzoesäure), es kann sich aber auch indifferent verhalten (vergl. Brenzcatechin und Protocatechusäure, Pyrogallol und Gallussäure); die Säureanilidogruppe verhält sich im einzigen untersuchten Fall inaktivierend (vergl. Gallussäureanilid mit Pyrogallol, Tafel 3). Eigentlich verhält sich Hydroxyl. Dieser Substituent kann nämlich je nach Stellung entweder stark aktivieren oder mäßig oder sogar sehr stark inaktivieren. *o*- und *vic.*-Stellung bedingen starke Aktivierung (Brenzcatechin, Protocatechusäure, Adrenalin, Pyrogallol, Pyrogallussäure), *p*-Stellung schwächere Aktivierung (Hydrochinon), *m*- (Resorcin, Orcin), symmetrische (Phloroglucin) und asymmetrische (Oxyhydrochinon) Stellung mäßige oder starke Inaktivierung, bis zur vollständigen Aufhebung der Katalyse (Phloroglucin).

Die Gültigkeit der Langenbeckschen Regeln.

W. Langenbeck hat neulich⁹⁾ besondere Regeln hinsichtlich der Wirkung von Substituenten bei organischen Katalysatoren aufgestellt. Es ist nicht zu leugnen, daß das Material der vorliegenden Mitteilung wenigstens anscheinend beträchtliche Abweichungen von diesen Regeln aufweist, nämlich:

1. Aktivierung und Inaktivierung sind, entgegen den Regeln 4 und 5, am stärksten bald in *o*- und *p*- (z. B. Carboxyl), bald in *m*-Stellung (Aminogruppe). Irgendeine bestimmte, bei verschiedenen Substituenten wiederkehrende aktivierende bzw. inaktivierende Stellung scheint es nicht zu geben.

2. Ein und derselbe Substituent kann, entgegen Regel 6, je nach der Stellung sowohl aktivierend als auch inaktivierend wirken. Dieses gilt besonders vom Hydroxyl, aber einigermaßen auch vom Methyl.

3. Nicht nur alle untersuchten Substanzen zweiter Ordnung, nämlich Carboxyl, Nitro-, Nitroso- und Sulfonsäuregruppe, sondern auch einige atypische Substituenten erster Ordnung, wie Aminogruppe und Chlor, wirken, entgegen Regel 6, inaktivierend. Es sei aber bemerkt, daß Langenbeck selbst den Abschnitt der Regel 6, der die gegensätzliche Wirkung der Substituenten erster und zweiter Ordnung betrifft, ausdrücklich mit Vorbehalt anführt.

Es ist möglich, daß die oben angeführten Abweichungen eine besondere Ursache haben. Früher⁸⁾ ist nämlich gefunden worden, daß die Aldehyd- und wohl auch die Ketogruppe auf die Katalyse stark hemmend wirken können. Es ist also erklärlich, daß, wenn das Phenol zu einem beträchtlichen Teil in der Ketoform vorliegt, eine Inaktivierung besonderer Art eintritt, wie z. B. beim Phloroglucin, bei dem die Inaktivierung zu vollständiger Lähmung der Katalyse führt. Die den Langenbeckschen Regeln zuwiderlaufende Inaktivierung beim Resorcin, Orcin, Oxyhydrochinon, *m*-Aminophenol, *m*-Dimethylamino- und *m*-Diäthylamino-phenol sowie beim Chlorhydrochinon ist wohl auch durch Annahme einer teilweisen Ketsierung erklärlich. — Die Arbeit wird fortgesetzt.

⁹⁾ Ztschr. Elektrochem. 46, 106 (1940).

2) *N-p-Tolyl-d-iso-glucosamin-oxim.*

2.7 g umgelagertes *p*-Toluidin-*d*-glucosid wurden in eine Lösung von 0.43 g freiem Hydroxylamin (1.3 Mol.) in 40 ccm absol. Alkohol eingetragen und einige Min. zum Sieden erhitzt. Beim langsamen Erkalten schied sich das Oxim in schneeweißen, wollig verfilzten Nadeln ab. Diese schmolzen nach einmaligem Umkrystallisieren aus absol. Alkohol konstant bei 135–136° (k. Th.).

4.000 mg Sbst.: 8.010 mg CO₂, 2.540 mg H₂O. — 3.903 mg Sbst.: 0.335 ccm N₂ (21°, 742 mm).

$C_{11}H_{13}O_3N_2$ (264.2). Ber. C 54.90, H 7.09, N 9.65.

Gef. C 54.61, H 7.10, N 9.73.

$[\alpha]_D^{25} = (-0.13^\circ \times 100) : (0.61 \times 1) = -21^\circ$ (Pyridin).

Mutarotation war nicht mit Sicherheit zu erkennen.

3) *p-Toluidin-d-mannosid* (VIII).

7 g *p*-Toluidin und 10 g *d*-Mannose wurden in 50 ccm absol. Alkohol unter Zusatz von 0.1 g Ammoniumchlorid 30 Min. zum Sieden erhitzt. Der Zucker ging dabei in Lösung und das gebildete *N*-Glucosid krystallisierte in glitzernden Stäbchen aus. Nach 14-stdg. Stehenlassen bei etwa 20° wurde abgesaugt und mit 30 ccm absol. Alkohol gewaschen. Ausbeute 14 g (94% d. Th.). Beim Umkrystallisieren aus 70-proz. Alkohol änderte sich der Schmp. von 184° (k. Th.) nicht mehr.

4.093, 4.206 mg Sbst.: 8.71, 8.915 mg CO₂, 2.62, 2.67 mg H₂O. — 5.155 mg Sbst.: 0.233 ccm N (21°, 746 mm).

$C_{11}H_{13}O_5N$ (260.2). Ber. C 57.99, H 7.06, N 5.20.

Gef. C 58.04, H 7.76, N 5.20.

$[\alpha]_D^{25} = (-1.25^\circ \times 100) : (0.69 \times 1) = -181^\circ$ (Pyridin).

Mutarotation nicht sicher erkennbar.

4) *N-p-Tolyl-d-mannamin* (VII).

5 g *p*-Toluidin-*d*-mannosid wurden in 150 ccm Methanol + 350 ccm Wasser mit Nickel¹²⁾ bei 40 Atü und 75° 6 Stdn. hydriert. Nach dem Erkalten wurde das ausgefallene Reduktionsprodukt mitsamt dem Katalysator abgesaugt und aus absol. Alkohol umkrystallisiert. Wollig verfilzte, weiße Nadeln, Schmp. 194–195°. Ausbeute nahezu die berechnete.

4.145 mg Sbst.: 8.80 mg CO₂, 2.94 mg H₂O. — 5.247 mg Sbst.: 0.245 ccm N₂ (21°, 746 mm).

$C_{11}H_{15}O_2N$ (271.2). Ber. C 57.56, H 7.74, N 5.16.

Gef. C 57.90, H 7.93, N 5.32.

2.994 mg Sbst.: 1.44 ccm CH₄ (20°) und 1.49 ccm CH₄ (95°). — 3.009 mg Sbst.: 1.46 ccm CH₄ (20°) und 1.50 ccm CH₄ (95°).

Ber. akt. H 6.00. Gef. akt. H 5.83 (20°), 6.04 (95°).

5.89 (20°), 6.05 (95°).

Oxydation mit Chromsäure.

11.525, 13.422 mg Sbst.: 2.70, 2.93 ccm n_{100}^{20} -NaOH.

Gef. 0.63 und 0.59 Mol. CH₃, COOH.

$[\alpha]_D^{25} = (+0.098^\circ \times 100) : (0.34 \times 1) = +28.8^\circ$ (Pyridin).

¹²⁾ F. Hoffmann-La Roche & Co., Dtsch. Reichs-Pat.-Anm. 2H 141703; P. Karrer u. H. F. Meerwein, Helv. chim. Acta 18, 264 (1936).

65-4307-1-B-5(12)

Translation from the German

Page 772

"The Amadori Re. arrangement"
Hahn, Weygand Vol. 20

Re: chemical reactions of toluidine glycoside,
toluidine of mannose, and
toluidine of mannoside.

Page 1258

"Enkvist", Vol. 73

Re: 2nd paragraph: "The Validity of the
Langerbeck Rules", statement that
W. Langerbeck recently (1940) established
special rules regarding the effect
of substituents in organic catalysis.
Material presented shows deviations
from these rules. 3 examples of
deviation are given.

Page 1289

Zwecker

258. Oskar Zwecker, "The spatial
Impediment, a Means of Analysis
of Inner-Molecular Forces"

Re: Discussion of A. Werner's thesis
that "the stereochemical ^(TR. No. 2) science
of the spatial relation of atoms to a
molecule) development must finally
make it possible to set all
formulas of structure into space so
that the space formulas permit

2.

in every individual case the reading off of the dependence of the properties on this arrangement. Some of the objections to the theory of V. Meyer are given.

pg. 1764

Klement, Reuber - "On Ester of Sulpho Acids (I.), Vol. 68

Re: Sulphantimonious Acids
Benzyl ester, Sulphantimonious acids - tolyl ester.

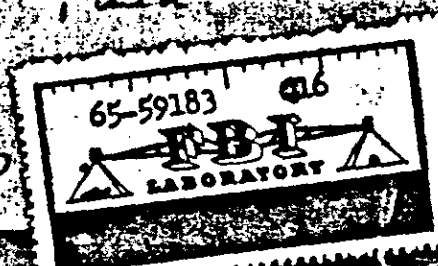
3-1.

65-4307-1-B-5(13)

3

Paul Starcher
 Currier, Currier & Mitchell, Wash. D.C.
 lives in South Charleston - phone 4-829.
 Age 37 years - work as physicist in the work laboratory
 is going to school at night - studying physics class
 at night. He has gone for 4 yrs. is working for
 P.S. degree. - Starcher is married & has one small
 daughter. - keenly interested in chemistry.
 Is now working on cracking out (which is
 pumped in from Oklahoma to Charleston) for
 the production of butadiene, the gasoline is
 sold by them as a by-product.
 Paul St. may be willing to work
 in the prospects of some better future.

1/20
 6/3/50
 t a p
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Re: ALFRED DEAN SACK
 ESPIONAGE - R
 (Bufile 65-59183)
 (AI file 65-1647)
 (SA file 65-4322)

EXHIBIT 1

65-4307-1-B-5(4)

Tuesday, May 24, 1946

Dear Harry - I just off writing this thinking I would hear from you but what with the strike and things I guess you are busy as hell.

I was to come up today to meet Mr. Howard Acheson as I told you, but last night Cranshaw called and said not to attempt to do it by train over as they were closing some of the tunnels and bridges and you never could tell what would happen as it would be murder to drive into New York.

I have had quite some experience on my own down here and things seem to be going to work out swell - I believe Dot's mother will come out here while Dot is in the hospital - it would be OK if she can as the children do get along with her.

On my trip to Conn. with Cranshaw I discussed with him what we had talked about - he is enthused, as it seems it never has been possible to get someone to really give the thing a complete work out. - there are many ways he can help you and you in turn can help - in other words I told him you would co-operate 100% by the I mean, maybe one dispersion won't work but another will - maybe one dilution won't work but another will - also talk with him about the new carriers such as the work emulsions and the resin dispersion - also take up with him the color talk we had - Tithium dioxide, etc. / Harry I do think he can help some of your problems - Get in touch with him

65-4307-1B5(4)

Who can you love?

I called Tom Black today (he is to call back later) - I told him we were both doing well and were going to blacklist him for his recent actions - he did sound sheepish - perhaps you were right again in your diagnosis.

I had in mind calling Norman Pugh when I get to New York today and coming down with him tonight - he comes down on Friday evening or so Miss Fleming the sugar house operator told me when she took me home the night before look from delivering the car back to Mike.

Harry I ran into some of the sugar house crowd today - I stopped in Pat's after I picked up Mike's car - Cocky & his gang - I do believe we did make some friends in their damn joints but I couldn't stay as I can't have customer's smell liquor? but what I was getting at is that they seemed genuinely anxious and glad about us.

If the strike continues, and I do hope it doesn't, I won't go up Monday but will come up as soon as I can and will call you when I get up there -

I will try to get down to Publishers tomorrow (Saturday) and see Canam, I do hope I can make it as you see if I do get down - he no doubt will let

6/3/50 TFC

3

McCabe know and then we will hear from
him, at least I figure it that way but
it is pure conjecture but we will see -
Also I had a card from Mr. Seare
at the Executive Employment Agency
he has a position with a Chemical Consultant
to call on the Chemical Trade - I was
in to see him today as he has been very
nice and I wanted to tell him about Arthur
but because of the stroke he left early so
I ~~left~~ saw another man who tells me
the job pays 4000 to start and will go
to 6000 after a short while but when I
figured the accession 275 and 24 years there
is not much difference and when I make
good I do think the 6000 will be there
plus retirement, insurance etc. but when
I was thinking, "how about Tom?" Good
he should be in his glory, in fact I forgot
about him and it was Dor who reminded
me that is why I called him - hell he
really could handle it and the dough
is there - when he calls I will tell

Am about it - and let me decide
Harry I really am rushing this, as the
writing no doubt shows, to get it in the
mail, I called the P.O. as I didn't
think special delivery would help and
maybe airmail might but he said to
send it as usual - so I'll just send
it First Class as even if you do receive
it tomorrow (Saturday) you won't do
much about it and Chomskow won't
be in the N.Y. office until Monday
at least - so try to get the inquiry
off to him and you ^{to} get together and
I think you may learn something -
he really is a smart tomato so anything
he suggests give it some thought - after all
some bright guys do come from M.I.T.
Call me when you can if you are
lucky, reverse the charges and if you
are stuck for transportation let me know
as long as Mike's car is there we can work
something out even if I have to drive to
32nd Street and pick you up on the fly -
Let me hear from you
Your Pal
Doc

6/3/50
JFC

June 7, 1950

SAC

SA William H. Naylor

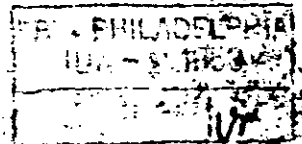
HARRY GOLD, was;
ESPIONAGE - R

GOLD RESIDENCE SEARCH MATERIAL

Exhibit: 65-4307-1-B-5(15)
Reference: Search Memo, June 5, 1950, Page 3
Description: A United Airlines Flight Schedule effective
April 28, 1946.
Possible Leads: No apparent leads since there are no markings on
the schedule.

WIN/jfm
JFM 65-4307

65-4307-1-B-5(15)



SAC, Philadelphia

6/23/50

SA T. SCOTT MILLER, JR.

HARRY GOLD, was.
ESPIONAGE - R

EXHIBIT NO. 65-4307-1B-5 (15)

This United Airlines schedule, which was effective 4/28/46, could not refresh GOLD's recollection, except that it was during the period when he was looking for work and at a time when he had been conferring with BROTHMAN relative to GOLD's going to work for BROTHMAN. GOLD recalled that BROTHMAN went to the Midwest to see HENRY KAISER, and GOLD thinks that possibly he was considering flying out to the Midwest to see BROTHMAN relative to his going to work for him.

This exhibit was shown to GOLD on 6/15/50.

TSM:HCF
65-4307

65-4307-F 0-5 (16)

P. H. Stewart
430 Addison Ave.
Westmont Collingwood

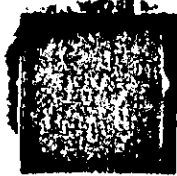
STAMP
HERE

Dr. James K. Stewart

Sherwin-Williams Co.

~~115th Street and Cottage Grove Avenue~~

Chicago 28, Illinois



Date Nov 14

Dear Sir: Nov 14
635 Columbia Ave
Daly 224

Please send full information and procedure in regard to my possible entry of a display in the special Chemical Trail Blazers presentation at the National Chemical Exposition.

Name _____
 Street _____
 City _____ Zone _____ State _____

*416
 YC
 6/1/50*



SAC

7/23/50

SA RICHARD E. BRENNAN

HARRY GOLD
ESPIONAGE - R

Exhibit 65-1307-1-B-5(17)

This exhibit, consisting of a manila envelope containing five items, was shown to GOLD on June 19, 1950.

GOLD said that the name J. H. BOWEN written on the cover of the envelope refers to the individual who interviewed GOLD for a job at the Philadelphia Navy Yard in 1946.

The letter contained therein to GOLD from the Drexel Institute Evening School, Philadelphia, GOLD identified as being the type of literature which he frequently received from Drexel as an alumnus of that school.

The 3" x 5" card containing the reference to Fish-Schurman Corp. GOLD identified as the name of a corporation which he did business with while employed at Pennsylvania Sugar Co. and A. Brothman Associates.

The two pages of handwritten information GOLD identified as being in his handwriting and pertained to work which he had done several years previously at Pennsylvania Sugar Co.

The Application for Federal Employment contained in the envelope was identified by GOLD as a copy of an application which he sent to the Philadelphia Naval Base in 1946 when he was attempting to secure employment.

The three sheets of perforated paper GOLD identified as being in his handwriting and stated that they are the result of library searches and contain bibliographical reference to chemical journals.

HEB:JCH
65-1307

THE DREKEL INSTITUTE
EVENING SCHOOL
PHILADELPHIA



Mr. Harry Gold
5032 N. Boudinot St.
Phila., Pa.

IPC
6-30

DREXEL INSTITUTE OF TECHNOLOGY

PHILADELPHIA

May 3, 1938

Mrs. L. S. Campbell
Drexel Institute
Philadelphia

Dear Mrs. Campbell:

The Drexel Alumnite for May interests me greatly. It is undoubtedly the best issue which I have seen and the inclusion of several scientific articles seems to me a step in the right direction. Any evening school could be proud of this paper, and I hope you will tell the Editor so.

Yours truly,

Park H. Kolbe (Signed)

Footnote: I am sure that this will be of interest to you as Dr. Kolbe, on being furnished a copy of the paper, must have been impressed or he would not have written the above letter to me.

L. S. C.

APPLICATION FOR FEDERAL EMPLOYMENT

INSTRUCTIONS — Answer every question clearly and completely. Type or write legibly in **BLACK INK**. To assure clear photographic copies for appointing agencies. If you are applying for a specific United States Civil Service Examination, read the Examination Announcement carefully, follow all directions, and mail this application to the office named therein; if not, mail with an explanatory letter to the U. S. CIVIL SERVICE COMMISSION, WASHINGTON, D. C., unless otherwise directed. Notify same office of any change of address.

This space is for your use:

1. Name of examination, if any, or name of position applied for: <u>Chemist</u>	AV	This space for U. S. Civil Service Commission	To U. S. Civil Service Commission
2. Place of examination (if a written test), or place of employment applied for: <u>U.S. Naval Base, Phila.</u> (City and State)			
3. Optional subject (if mentioned in examination announcement):			

4. Mr. <u>Harry</u> <u>Gold</u> (First name) (Middle) (Surname, if any)	D. S.		
5. <u>6823 Kindred Street</u> (R. D. or street and number)	Gr.		
<u>Philadelphia 24, Pa.</u> (City or post office, and State)	SEX		
6. Date of birth (month, day, year): <u>Dec. 12, 1919</u>	7. Age last birthday: <u>35</u>	8. Date of file application: <u>April 18, 1946</u>	9. Legal or voting residence: State <u>Pennsylvania</u>
10. Telephone numbers: <u>Pilgrim 2492</u> (Residence phone) (Business phone)	11. (a) Check one: <input checked="" type="checkbox"/> Male <input type="checkbox"/> Female (b) Check one: <input checked="" type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced	12. Height with shoes: <u>5-8 1/2</u> Weight: <u>156</u>	13. Where were you born? <u>Bern, Switzerland</u> (Town) (State or country)

Preference: Allowed <input type="checkbox"/> Veteran <input type="checkbox"/> Disability <input type="checkbox"/> Wife <input type="checkbox"/> Widow <input type="checkbox"/> Discharged <input type="checkbox"/> Closed <input type="checkbox"/>	Act's name: Approved by: Street: No. & Bk. Date Rec. Material off. Material Blvd. Material ret.
---	--

Indicate "Yes" or "No" answer by placing X in proper column	Yes	No	Indicate "Yes" or "No" answer by placing X in proper column	Yes	No
14. Are you a citizen of the United States? <small>Unless otherwise instructed, naturalized citizens must submit, along with this application, Naturalization Certificate, other foreign-born, documentary proof of citizenship. Documents will be returned.</small>	X		22. (a) Were you ever in the U. S. military or naval service? <small>If so, give branch of service and date of last discharge.</small> Army ___ Navy ___ Marine ___ Coast Guard ___ Date ___		X
15. Have you ever been arrested, or summoned into court as a defendant, or indicted, or convicted, or fined, or imprisoned, or placed on probation, or has any case against you been filed, or have you ever been ordered to deposit collateral for alleged breach or violation of any law or police regulation or ordinance whatsoever? <small>If so, list all cases, without any exception whatsoever, under item 45, page 4, giving in each case (1) the date, (2) your age at the time, (3) the place where the alleged offense or violation occurred, (4) the name and location of the court, (5) the nature of the offense or violation, (6) the penalty, if any, imposed, or other disposition. The above question includes arrests by military or naval authorities and disciplinary action imposed by courts martial, as well as in civil cases. If appointed, your fingerprints will be taken.</small>		X	22. (b) Were all discharges granted under honorable conditions? <small>(a) Have you already established military preference with the Civil Service Commission? ___ If so, check kind of preference below: ___ Veteran ___ Disabled ___ Wife of disabled ___ Widow of veteran.</small> If you are applying for a specific examination, and wish to claim veteran preference in connection with it, attach C. S. C. (Preferential Form 14, together with the evidence specified therein.		
16. (a) Have you any physical defect or disability whatsoever? (b) Have you ever had a nervous breakdown? <small>If your answer to either (a) or (b) is yes, give full particulars under item 45, page 4.</small>		X	23. Have you registered under the Selective Service Act? If so, give address and number of local board: <u>12-65</u> <u>5th and Warming Aves.</u> If classified, give your classification: <u>4A</u> Your order number: <u>2425</u>	X	
17. Do you advocate or have you ever advocated, or are you now or have you ever been a member of any organization that advocates the overthrow of the Government of the United States by force or violence? <small>If so, give complete details under item 45.</small>		X	24. (a) Are you now a member of any branch of military or naval reserve? If so, give name of organization (b) Are you now an active duty?		X
18. Have you ever been discharged for misconduct or unsatisfactory service, or forced to resign from any position? <small>If so, state (under item 45) when and where employed and give the name and address of your employer and the reason for your discharge or forced resignation in each case.</small>		X	25. Give number of persons completely dependent on you, other than husband or wife: <u>None</u>		
19. Within the past 12 months, have you used intoxicating beverages? If so, specify: <input checked="" type="checkbox"/> Occasionally <input type="checkbox"/> Habitually <input type="checkbox"/> To excess	X		26. Would you accept short-term appointments? ___ 6 months ___ 3 months ___ 1 month		X
20. Are any members of your family or relatives (either by blood or by marriage), employed by the United States Government, excluding persons in the armed forces? <small>If so, give name, address, relationship, and branch of service of each such relative under item 45.</small>		X	27. (a) Would you accept appointment anywhere outside the United States? Give location preferences: ___		X
21. Are you NOW employed by the Federal Government? (a) If so, (Department or agency) ___ (Position) ___ (b) If you now are or have ever been so employed, give dates: from ___ (Month) ___ (Year) to ___ (Month) ___ (Year)		X	(b) Would you accept appointment outside the United States? Give locations acceptable: ___		X
			(c) Would you accept appointment in Washington, D. C.? <input type="checkbox"/> If so, and if you are applying for a specific examination, refer to the examination announcement to see if the Certificate of Residence (C. S. C. Form 12) is to be submitted. Proof of residence is required for many kinds of positions.		X
			28. What is the lowest entrance salary you will accept? <u>\$3,600 per year</u> You will not be considered for positions paying less.		
			29. If you are willing to travel specify: <u>Occasionally</u> <input checked="" type="checkbox"/> Frequently <input type="checkbox"/> Occasionally		
			30. How much notice will you require to report for work? <u>None</u>		

FFL 6-3-50

36. Do you hold any position or office under C State, Territory, County, or municipality? NO
 If so, give details under Item 45. Yes No

38. Do you receive any pension or other benefit (exclusive of Adjusted Service Certificate) for military or naval service, or an annuity from the U. S. Government under any Retirement Act? NO
 If so, give details under Item 45. Yes No

39. Show name and address of wife's (or husband's) employer (if none, write "None")
None

41. (a) Were any of the following members of your family born outside Continental U. S. A? Yes
 Yes No
 Wife _____ Husband Father Mother _____

If so, indicate which by marking the appropriate space, and show under Item 45 for each, (1) full name, including maiden name of wife or mother; (2) birthplace; (3) native citizenship; and (4) if U. S. naturalized, date of naturalization.

(b) Have you any relatives, by blood or by marriage (excluding persons in the U. S. armed forces), now living in a foreign country? NO
 Yes No

If so, for each relative show under Item 45 the (1) name, (2) relationship (3) place of residence, (4) birthplace, (5) present citizenship, and (6) whether transient or resident.

42. List any special skills not shown in Question 37, such as operation of short-wave radio, multith, key-punch, turret-lathe, or scientific or professional device:

SKILL _____ SKILL _____
 SKILL _____ SKILL _____
 Words per minute in typing _____ stenography _____

Do you have a license to operate an automobile? NO
 Yes No

43. State what kind of work you prefer Chemist

44. Give any special qualifications not covered elsewhere in your application, such as (a) your more important publications (do NOT submit copies unless requested); (b) your patents or inventions; (c) hobbies, construction of instruments, etc.

I have had considerable experience in Report Writing covering the summation of experimental data and painting the direction of further work. Also, I should mention that I am thoroughly familiar with the Chemical Literature

45. Space for detailed answers to other questions:

Item No.	Write in left column numbers of items to which detailed answers apply
32	<u>If an exact record of the Semester Credits earned are required, I can obtain a transcript of my record at each of the three schools. I wish to note here, however, that I repeated course (as refreshed) in: Quantitative Analysis (Brace), Physical Chemistry (Taylor), Elementary Organic Chemistry (Xavier), Analytic Geometry (Xavier), Differential Calculus (Xavier). In addition I had the following courses not normally given to Undergraduate Schools: Advanced Organic Chemistry, Qualitative Organic Analysis, Inorganic Preparations, Theory of Equations (All of Theoretical Physics (Xavier U.)). Also, I had full semester courses in the poetry of Milton, Browning, and a study of modern American and British Poetry. (Xavier U.)</u>
45	<u>Father - Sam Gold - Russia Mother - Celia Omsensky - Russia My father was naturalized on June 6, 1922, and at that time the law then, my mother and I were naturalized on his papers.</u>

If more space is required, use a sheet of THIN paper, size 8 x 10 1/4 inches. Write on each sheet your name, full address, date of birth, and examination title (if any). Use one side only. Enclose, unattached, with application.

If you claim preference for the Indian Service as an Indian, you must file with this application a certificate from the superintendent of the Indian agency where you are registered, or from the Commissioner, Bureau of Indian Affairs, showing that you have at least one-fourth Indian blood.

JURAT (OR OATH).—This jurat (or oath) must be executed.

The following oath must be taken before a notary public, the secretary of a United States civil service board of examiners, or other officer authorized to administer oaths, before whom the applicant must appear in person. The following are among those not authorized to administer this oath: Postmasters (except in Alaska), Army officers, post-office inspectors, and chief clerks and assistant chief clerks in the Railway Mail Service.

The composition and work in connection with any material required to be submitted for this examination are entirely my own, except where I have given full credit for quoted matter or the collaboration of others by quotation marks and references, and in the composition of the same I have received except as indicated fully in my explanatory statement.

I, the undersigned, **DO SOLEMNLY SWEAR (OR AFFIRM)** that the statements made by me in answer to the foregoing questions are full and true to the best of my knowledge and belief, **SO HELP ME GOD.**

If female, prefix "Miss" or "Mrs." and if married use your own given name, as "Mrs. Mary L. Doe."

(Signature of applicant) Harry Gold
 (Sign WITH PEN AND INK your name—no given name, initial or initials, and surname)

Subscribed and duly sworn to before me according to law by the above-named applicant this _____ day of _____ 19____ at city [or town] of _____ county of _____ and State [or Territory or District] of _____

(Signature of official)

Print or type your name here as in Item 4

Harry Gold

21. (a) Have you ever filed applications for any Federal civil service examinations? (If so, list them below.)

Yes No

Title of examinations	Examined in what cities	Month and year	Rating

(b) Have you passed any State or other civil service examination (other than the above) within the last 5 years? (If so, give details under Item 45)

Yes No

22. EDUCATION: (a) Circle highest grade completed, elementary or high school: 1 2 3 4 5 6 7 8 9 10 11 12 Did you graduate? Yes No

Name and location of school	Dates attended		Years completed		Degrees conferred		Semester hours credit
	From	To	Day	Night	Title	Date	
(a) College or university <u>University of Pennsylvania</u>	<u>1932</u>	<u>1932</u>	<u>1 1/2</u>				
<u>Academy Evening School</u>	<u>1934</u>	<u>1936</u>		<u>2 1/2</u>	<u>B.S. Eng.</u>	<u>1936</u>	<u>60</u>
<u>Xavier University</u>	<u>1938</u>	<u>1940</u>	<u>2</u>		<u>D.S.</u>	<u>1940</u>	<u>5</u>
(b) Other <u>St. Joseph's College</u>	<u>1942</u>	<u>1944</u>		<u>1</u>	<u>Studies</u>	<u>1944</u>	<u>12</u>
<u>St. Joseph's College</u>	<u>1944</u>	<u>1945</u>		<u>1/2</u>	<u>Lab. Glassblowing</u>		<u>3</u>

(c) List your four chief undergraduate subjects	Semester hrs.	List your four chief graduate subjects	Semester hrs.
<u>Chemistry</u>	<u>5</u>		
<u>Chemical Engineering</u>	<u>5</u>		
<u>Mathematics</u>	<u>5</u>		
<u>English Literature</u>	<u>5</u>		

23. Indicate your knowledge of foreign languages.

Language	READ			SPEAK			UNDERSTAND		
	Ess.	Good	Fair	Ess.	Good	Fair	Ess.	Good	Fair
<u>German</u>									
<u>French</u>									

24. Are you now a licensed member of any trade or profession (such as electrician, radio operator, pilot, lawyer, CPA, etc.)? Yes No
 If not, have you ever been licensed?
 Give kind of license and State _____
 Earliest license (year) _____
 Most recent license (year) _____

25. REFERENCES: List five persons, who are not related to you by blood or marriage, who live in the United States, and who are or have been mainly responsible for close direction of your work, or who are in a position to judge your work critically in those occupations in which you regard yourself as best qualified.

Full name	Address (Give complete address, including street and number)	Business or occupation
<u>En. John J. Benson, Jr.</u>	<u>Xavier U., Victory Parkway, Cinti., O.</u>	<u>Dean of University</u>
<u>Mr. N. Alvarez</u>	<u>1837 N. Delaware Ave., Phila., Pa.</u>	<u>Supt. of Distillery</u>
<u>Mr. John A. Manley</u>	<u>1837 N. Delaware Ave., Phila., Pa.</u>	<u>Genl. Manager of Sugar Ref.</u>
<u>Mr. Arthur L. Simms</u>	<u>36th and Cassnut Str., Phila., Pa.</u>	<u>Mechanical Engineer</u>
<u>Dr. Gustave T. Reich</u>	<u>15th and Chestnut Str. (E. 10), Phila., Pa.</u>	<u>Chemical Engineer</u>

26. May inquiry be made of your present employer regarding your character, qualifications, etc.? Yes No

27. EXPERIENCE: In the space furnished below give a record of every employment, both public and private, which you have had since you first began to work. Start with your present position and work back to the first position you held, accounting for all periods of unemployment. Describe your field of work and position and, except for employments held less than three months, give your duties and responsibilities in such detail as to make your qualifications clear. Give name you used on pay roll if different from that given on this application.

Place	Exact title of your position	Salary: Starting \$
From _____ (Month) _____ (Year) to _____ (Month) _____ (Year)		Per _____ Final \$
Name of employer: <u>None</u>	Duties and responsibilities	
Address		
Kind of business or organization		
Number and class of employees you supervised		
Name and title of your immediate supervisor	Machines and equipment you used	

DO NOT WRITE IN THIS SPACE

Place Philadelphia, Penna.
 From Jan 1943 to Feb 1946
 Name of employer Penna. Sugar Co. Subsidiary
 Address 1433 N. Delaware Ave. Phila. 25, Pa.
 Kind of business or organization Sugar Refining, Alcohol and Distilling
 Number and class of employees you supervised 1000 - Plant Operator (year men)
 Name and title of your immediate superior Mr. Nemesis Alvord
 Reason for leaving Closing down of the Alcohol Division

Exact title of your position Supervisor of Safety Starting 1943
 Chemical Central - Wynona, Pa.
 Dates and responsibilities Sept. 1944 to Feb. 1946
 My partner, Mr. M.K. Daugherty, and I were in complete charge of fermentation in the Distillery - from Raw Material Analysis and Control, through Mashings, Production, Yeast Making, and Quality of Final Products and By-products (Dry and Recycled Yeast). We were directly responsible for the Fermentation Efficiency. In addition to the regular gravimetric and volumetric laboratory work, we used the Tag (blue) Flash Point Tester, Haeppler Falling Ball Viscometer, and Jones Refractometer.

From Jan 1941 to Aug 1941
 Name of employer Same as with the
 Address exception of leaves of absence to attend school.
 Kind of business or organization I was temporarily employed by the above firm.
 Name and title of your immediate superior Dr. Gustave T. Reich
 Reason for leaving Dr. John P. Manley

Exact title of your position Chemist Salary Starting \$ 3125
 Per yr. Paid \$ 2800
 Dates and responsibilities Jan. 1941 to Aug. 1941
 1. Microbiological Vitamin Assays for Factors of the B-Complex
 2. Water Examination for A. Cell and Total Bacterial Count
 3. Thermophilic Bacteria Counts on Tinned Canned Sugar
 4. Separation of Sugars from Non-Sugars in Molasses (Research Project)
 We used the ordinary microbiological techniques of Media Preparation, Incubation, Torsion, Growth Measurements, also, Serial Dilutions.

From Jan 1936 to Aug 1937
 Name of employer Same
 Address Same
 Kind of business or organization Same - Yeast Recovery
 Number and class of employees you supervised Two (2) Yeast Recovery
 Name and title of your immediate superior Dr. Gustave T. Reich
 Reason for leaving

Exact title of your position Chemical Engineer Salary Starting \$ 2500
 Per yr. Paid \$ 2100
 Dates and responsibilities July 1935 to Dec. 1935
 Initial Operation (on shift work) of Dry Yeast Recovery Plant and Breaking in of Cream July 1936 to Aug. 1937
 Pilot Plant Development Work on Recovery of CO₂ from Stack Gases, this comprised:
 1. Design and Operation of Mechanical Absorption and Decomposition Eq. - Also Power Measurements
 2. Five Gas Analysis by Orsat Apparatus
 3. Development of new method for Na₂CO₃ NaHCO₃
 Machines and equipment you used Latent involving use of D. crystalline
 4. Measurement of Rates of Gas Flow with orifice and Vent Tube

From Jan 1932 to Sept 1932
 Name of employer Same
 Address Same
 Kind of business or organization Same
 Number and class of employees you supervised
 Name and title of your immediate superior Dr. Gustave T. Reich
 Reason for leaving

Exact title of your position Laboratory Assistant Salary Starting \$ 1200
 Per yr. Paid \$ 1500
 Dates and responsibilities Jan 1932 to Sept 1932
 Routine analytical work in Sugar Refinery
 This included work with the Analytical balance, Polarograph, Refractometer, pH (electrometric) Apparatus, Ash Detector (gravimetric and conductivity), Mixers (gravimetric and distillation), Calorimeter (steam) and Kjeldahl Apparatus. Also, letters carried out various volumetric determinations for members of the Research Staff.
 Machines and equipment you used

If more space is required, use a Continuation Sheet (Standard Form No. 50) of a sheet of paper, size 8 1/2 x 10 1/2 inches. Write on each sheet your name, full address, date of birth, and contribution title (if any). Enclose unattached with application.

Fisk-Schurman Corp.
230 East 45th Street
New York - 17 - N.Y.

"Falling Ball Viscometer."
Hoeppler -

Viscounts of Gooch.

TFC
6-3-52

Routine analytical work on sugar

Refinery Jan to Sept. 1929 1930 parts

Nature of work

Sugar Refinery control including testing of raw sugar and following the various stages of the refining process. also testing of materials used in refining such as bone black (char) and diatomaceous earth (Hyflo, etc).

Instrument

- analytical balance
- refractometer
- pH (electrometric) app.
- air (gravimetric & conductivity methods)
- colorimeter (tanner)
- moisture (gravimetric)
- moisture analyzed - involving the combined use of polarimeter & precise gravimetry (min. water) reducing sugar detns.

Both the ~~polars~~ raw sugar & the moisture analyses were checked by ~~the~~ two outside laboratories & exact work was necessary.

March 1st to June 30

July 1st to Sept. 30

Pilot plant development work on recovery of CO₂ from stack (fuel) gases. This involved

1. design & operation of mechanical adsorption plant
2. ~~stack~~ fuel gas analyses by wet and
3. development of a new method for ~~the~~ detn of Na₂CO₃ - NaHCO₃ ratios

July '40
Nov '40

in place of the conventional microbiological

operation of Dry-Product-Element Heavy plant in Butteley. This plant was the first of its kind & six members of the lab were ~~put~~ sent into the plant to operate the eqpt. during the shutdown period. The essential eqpt. included extensive

1. High speed (4000 rpm) centrifuge
2. material transfer eqpt (~~vacuum~~ - ~~sterile~~ centrifugal)
3. a double drum dryer
4. a pulverizer

~~vacuum~~
for eqpt

Dec '40
Feb '42

Microbiological vitamin assays on the yeast produced above. This included the setting up of the laboratory ~~of~~ well as the actual assay work itself. The factors ~~of~~ of the B complex were

- B₂ (Riboflavin)
- Pantothenic acid
- Niacin
- Picnic
- and
- Thiamin (this last was ~~not~~

data actually

not a microbiological bacterial growth method) but depended on the rate of yeast pure yeast growth as measured by CO₂ evolution (method of Schultz, Atherton & Frey)

March '42
April '43

Research work on

05-2-77

Carroll's ...
D - N ...

J. S. ...
Vol. VII ...
Taylor ...
Vol. II ...
1940 ...
1940 ...
1940 ...

[Faint handwritten notes]

reverse of previous page ↗

SAC

June 7, 1950

SA WILLIAM E. HUGHES

HARRY GOLD, was.,
ESPIONAGE - R

ANALYSIS OF GOLD RESIDENCE SEARCH MATERIAL

Description:

A celluloid picture in color of subject HARRY GOLD working with chemical instruments. On the reverse side is the statement:

"This is a Kodachrome print made by Eastman-Kodak Company, T.M.Reg. U. S. Pat. Off., June 10, 1949," indicating it must have been a recent picture.

Lead:

None.

WEH:as
65-4307

65-4307-1B5 (22)

(98/100%), die doch wohl in Preise höher steht, als gewöhnliche Ofenaschen, billiger sogar als Ofenaschen herstellen. Ich möchte denselben geeignete Vorschläge unterbreiten. Auch möchte ich empfehlen, die Fabrikation von Kaliummetabisulfit aus dem anfällenden Doppelsalz ($K Na CO_3 + 10 aq$) eventuell anzugliedern für Export. Dies Product wird in Ländern, die Wein erzeugen, viel gebraucht und steht in Preise hoch.

Ich wäre Ihnen für Ihr Entgegenkommen sehr dankbar und zeichne

Hochachtungsvoll

Mr. B. Wiley.

Gotland

TRANSLATION FROM THE GERMAN

65-4307-1-B-5 (22)

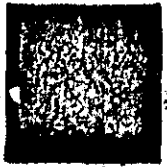
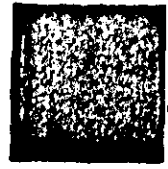
(98/100%), which is, to be sure, higher in price than ordinary oven ashes, and is even cheaper to manufacture than oven ashes. I should like to submit suitable proposals to (for) these. I should also like to recommend the possible combining for export of the manufacture of potassium metabisulphite from the accruing double salt ($K_2NaCO_3 + 10 aq$). This product will be used a great deal in countries which produce wine and is high in price.

I should greatly appreciate your reply and am,

Respectfully

Chr.(?) B. Heiler

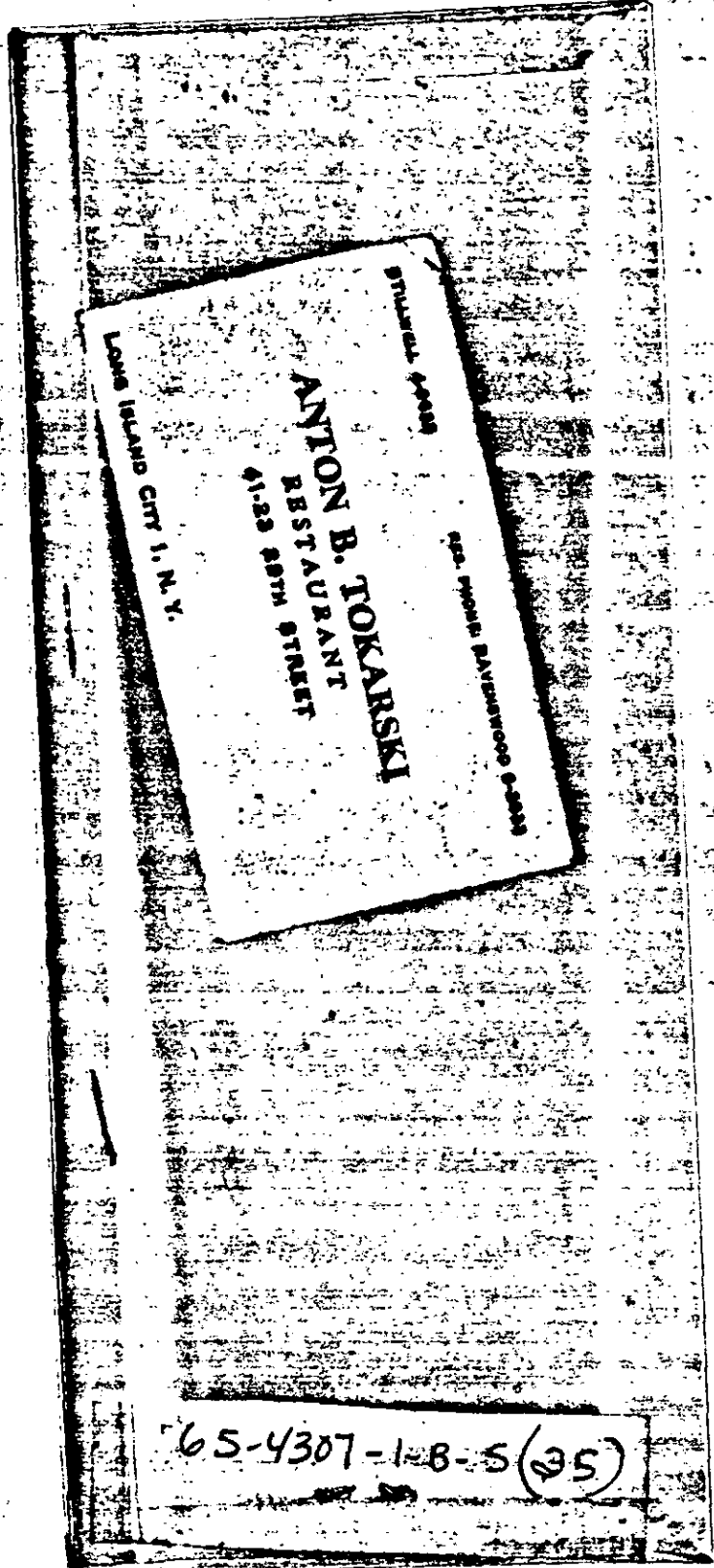
Z.L.



65-4307-1-B-5(24)



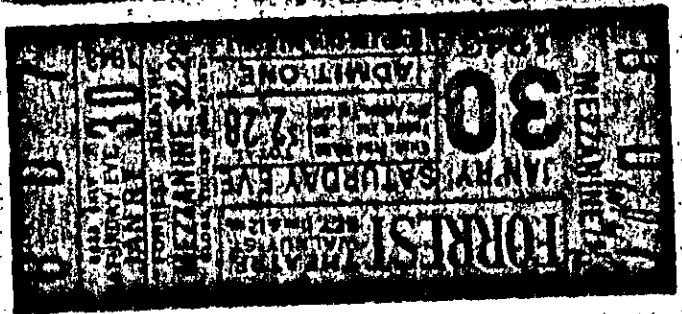
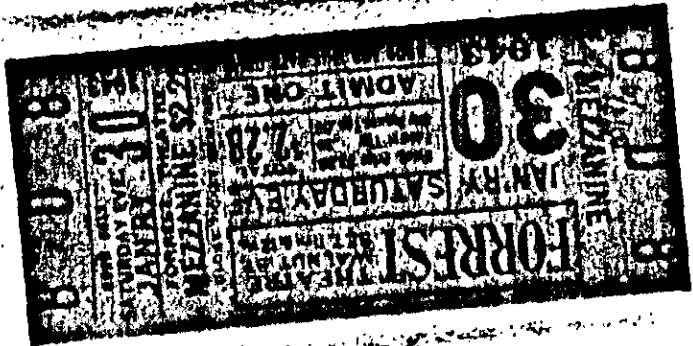
#24



STURTELL 4-30-34
ANTON B. TOKARSKI
RESTAURANT
41-23 83TH STREET
LONG ISLAND CITY 1, N. Y.

65-4307-1-B-5(35)

65-4307-1-B-5 (ac)





Telephone: PENNAPACKER 1185

1428 WALNUT STREET

PHILADELPHIA

MOBYVILLE

MOBYVILLE MANNER

in the

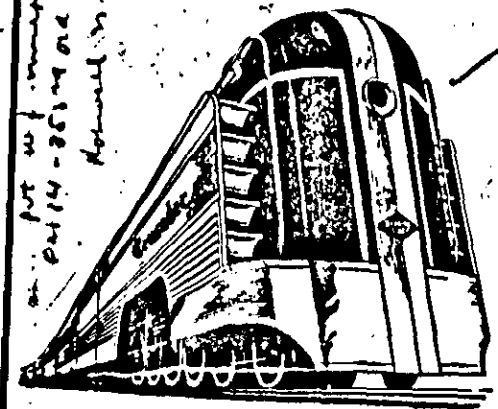
Express

4/15
1921
100

NOTICE: The management reserves the right to revoke the license granted this ticket by refunding its face value. Examine your tickets and change as no other ticket will be received afterwards. No ticket exchanged or money refunded.

FOREST
THEATRE
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BET. 11th & 12th
Tel. Pennyacker 1921

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Rochester, N. Y.
ROCHESTER, N. Y.
9-15
7871
100-11



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M _____

Address _____



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W. J. F. C.
4/15/50 4/15/50 #26

Following is a list of principal Ticket Offices where tickets may be purchased or information obtained.

PHILADELPHIA

CITY OFFICES

HOTEL ADELPHIA, CHESTNUT STREET AT 15TH
BENJAMIN FRANKLIN HOTEL, 339 CHESTNUT ST.
FIDELITY-PHILA. TRUST BLDG., BROAD AND
WALNUT STREETS
W. S. COOKE, DISTRICT PASSENGER AGENT

STATIONS

READING TERMINAL, 15TH AND MARKET STREETS
MARKET STREET WHARF FOR ATLANTIC CITY, OCEAN CITY,
SEA ISLE CITY, STONE HARBOR, WILLOWOOD AND CAPE MAY

SHAMOKIN

JOHN M. BOLIN, DISTRICT PASSENGER AGENT
STATION, E. INDEPENDENCE STREET

READING

CITY OFFICE, 415 N. 5TH STREET

ERIC C. FESLEY, DISTRICT PASSENGER AGENT

STATIONS

GREEN STREET, BETWEEN 6TH AND 7TH
CORNER FRANKLIN AND 7TH STREETS

ATLANTIC CITY

PENNSYLVANIA-READING SEASHORE LINES

CITY OFFICE, BROADWALK NEAR NORTH CAROLINA AVE.

LOUIS S. KAMMER, CITY TICKET AGENT

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Railway
System**

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3.25
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3.25
Total 29.75

RESERVATIONS

Space _____
Car No. _____
Your Train _____
Leaves _____
Station _____
Date 4/13/50
TR 67/50

HARRY GOLD
ESPIONAGE - C

Exhibit 65-4307-1-B-5(27)

This exhibit, consisting of a memorandum book with the date 1947 imprinted on the front cover, was exhibited to GOLD on June 19, 1950.

GOLD stated that the notation "Mfg. Chemists Assn., 608 Woodward Bldg., Wash. 5, D. C." was the address of a business firm in Washington, D. C. and that the notations on the next line consist of chemical specifications.

GOLD said that SARA HERSHER, 212 1/2 Spruce St., is the name and address of the apartment where THOMAS L. BLACK lived upon one occasion. GOLD said that SARA HERSHER is a relative of JACK FASS an associate in business of THOMAS L. BLACK. GOLD stated that he does not know SARA HERSHER except by reputation.

REB:DNH
65-4307

65-4307-1B-5(27)

SPECIAL DATA
608 Woodbury
Wash. S, DC
W. 11050473
FILE
CA. B. 17

C

SPECIAL DATA

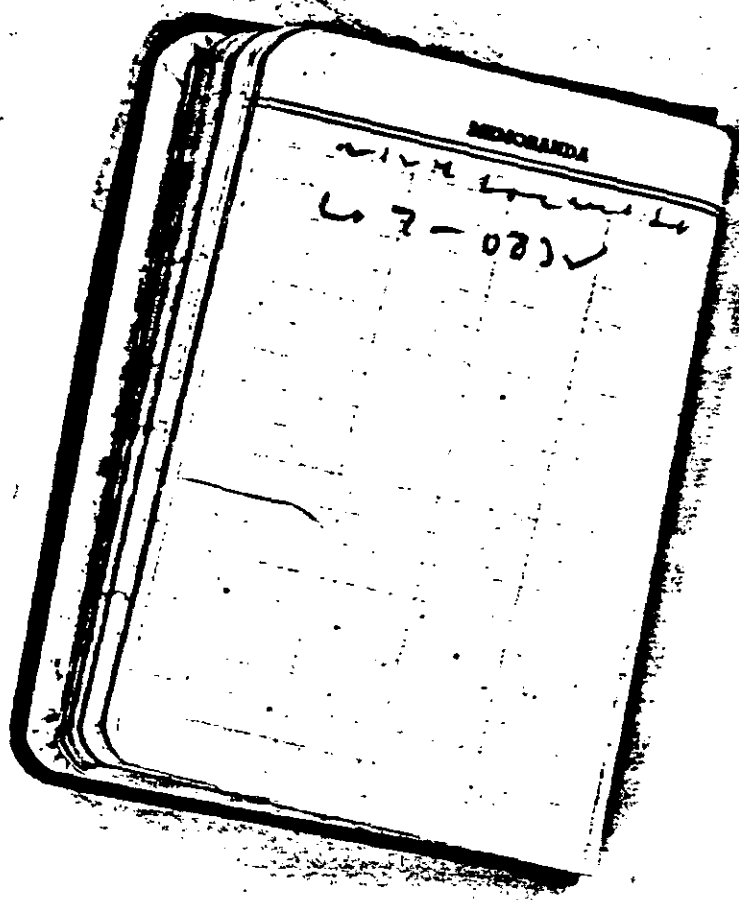
~~26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100~~

Mr 202 17 13 15
(1937)

Mr 673, 404-409

1/15/37 1937
36

28 1/2 - 37



MEMORANDA

M. H. ...
67-081 ✓

65-4307-1-B-5(28)

von Decker

542

6/3/50

Biltz und Heyn

	Ber. für C ₁₀ H ₁₀ O ₂ N ₂	Gef.
C	50,2	50,5
H	3,3	3,8
N	26,5	26,7

Der Stoff löste sich reichlich in heißem Wasser; weniger in Alkohol und den übrigen üblichen Lösungsmitteln; kaum in Äther und Ligroin.

Reduktion zu Hydantoin. 0,5 g Oxyhydantoylamid wurden mit 5 ccm rauchender Jodwasserstoffsäure auf dem Wasserbade reduziert, und die Lösung nach Entfärben mit Phosphoniumjodid bei Unterdruk eingedampft. Aus der alkoholischen Lösung des Rückstandes kristallisierten 0,2 g Hydantoin; ber. 0,3 g. Schmelzp. 220° (k. Th.).

Oxydation zu Parabansäure. 0,5 g 5-Oxyhydantoylamid wurden mit einer Lösung von 0,5 g Kaliumpyrochromat und 0,7 g konzentrierter Schwefelsäure in 5 ccm Wasser $\frac{1}{2}$ Stunde unter Rückfluß gekocht. Dann wurde im Vakuumexsiccator zum Sirup eingedunstet, dieser mit Alkohol ausgekocht, und der Rückstand des alkoholischen Auszuges aus wenig Wasser umkristallisiert. So wurden 0,2 g Parabansäure erhalten; ber. 0,36 g. Schmelzp. 240° (k. Th.), Zers. Bei derselben Temperatur zersetzte sich ein Gemisch mit reiner Parabansäure.

III. Darstellung von Alloxan;

von Heinrich Biltz und Myron Heyn.

Fast jeder Studierende der Chemie stellt bei seinen organisch-präparativen Arbeiten auch einmal Alloxan aus Harnsäure her. Nach E. Fischers Anleitung zur Darstellung oxydiert er Harn-

Darstellung von Alloxan.

81

von mitausgefallenem Schwefel durch Ausziehen mit viel Wasser — was durch Anwendung von Stannochlorid als Reduktionsmittel vermieden werden kann¹⁾ — und oxydiert das gereinigte Alloxantin mit Salpetersäure. Im folgenden ist ein neuer Weg beschrieben, der Alloxan direkt aus Harnsäure in einer Operation zu erhalten gestattet. Er besteht darin, daß in ein Gemisch von 1 Mol Harnsäure, Eisessig und etwa 5 Mol Wasser Chlor geleitet wird, wobei sich *Alloxanmonohydrat* in bester Ausbeute abscheidet. Auch größere Mengen Harnsäure können so bequem umgesetzt werden. Das Rohprodukt ist für weitere Umsetzungen ausreichend rein, kann übrigens von ein wenig eingeschlossener Harnsäure durch Umkristallisieren aus Wasser bequem gereinigt werden.

Die Reaktion ist nicht ohne Interesse. Wie in der vorhergehenden Arbeit gezeigt worden ist, wirkt Chlor auf Harnsäure in Gegenwart von Eisessig nicht ein. Wird dem Eisessig dabei aber ein Mol Wasser — auf die Harnsäure berechnet — zugesetzt, so entsteht 5-Chlorpseudoharnsäure. Werden mehr als 3 Mole Wasser genommen, so setzt sich diese mit dem Wasserüberschusse um, und es bildet sich Alloxan.

Wir verfahren folgendermaßen. In einem 0,8 Liter fassenden Erlenmeyerkolben, dessen Kork ein bis fast zum Boden reichendes Gasleitungsrohr und ein kurzes Rohr zum Austritt der Gase trug, wurden 100 g fein zerriebene Harnsäure mit einem siedenden Gemische von 300 ccm Eisessig und 50 ccm Wasser — d. h. fast 5 Mole — übergossen. Dann wurde unter *dauerndem, lebhaftem Umschütteln* aus einer Stahlflasche mit Drosselventil Chlor in *stürmischem* Strome eingeleitet. Das Chlor tritt dabei fast völlig in Reaktion, durch die zu und für sich nicht große Umsetzungswärme bleibt die Temperatur der Mischung genügend hoch, namentlich, wenn der Kolben

	Ber. für $C_8H_8O_2N_2$	Gef.
C	80,3	80,5
H	2,2	2,6
N	20,5	26,7

Der Stoff löste sich reichlich in heißem Wasser; weniger in Alkohol und den übrigen üblichen Lösungsmitteln; kaum in Äther und Ligroin.

Reduktion zu Hydantoin. 0,5 g Oxyhydantoylamid wurden mit 5 ccm rauchender Jodwasserstoffsäure auf dem Wasserbade reduziert, und die Lösung nach Entfärben mit Phosphoniumjodid bei Unterdruck eingedampft. Aus der alkoholischen Lösung des Rückstandes kristallisierten 0,2 g Hydantoin; ber. 0,3 g. Schmelzp. 220° (k. Th.).

Oxydation zu Parabansäure. 0,5 g 5-Oxyhydantoylamid wurden mit einer Lösung von 0,5 g Kaliumpyrochromat und 0,7 g konzentrierter Schwefelsäure in 5 ccm Wasser $\frac{1}{2}$ Stunde unter Rückfluß gekocht. Dann wurde im Vakuumexsiccator zum Sirup eingedunstet, dieser mit Alkohol ausgekocht, und der Rückstand des alkoholischen Auszuges aus wenig Wasser umkristallisiert. So wurden 0,2 g Parabansäure erhalten; ber. 0,36 g. Schmelzp. 240° (k. Th.), Zers. Bei derselben Temperatur zersetzte sich ein Gemisch mit reiner Parabansäure.

III. Darstellung von Alloxan

von Heinrich Biltz und Myron Heyn

Fast jeder Studierende der Chemie stellt bei seinen organisch-präparativen Arbeiten auch einmal Alloxan aus Harnsäure her. Nach E. Fischers Anleitung zur Darstellung organischer Präparate oxydiert er Harnsäure mit Kaliumchlorat und Salzsäure, fällt aus der Lösung mit Schwefelwasserstoff Alloxantin, reinigt dies

von mitausgefallenem Schwefel durch Ausziehen mit viel Wasser — was durch Anwendung von Stannochlorid als Reduktionsmittel vermieden werden kann¹⁾ — und oxydiert das gereinigte Alloxantin mit Salpetersäure. Im folgenden ist ein neuer Weg beschrieben, der Alloxan direkt aus Harnsäure in einer Operation zu erhalten gestattet. Er besteht darin, daß in ein Gemisch von 1 Mol Harnsäure, Eisessig und etwa 5 Mol Wasser Chlor geleitet wird, wobei sich *Alloxanmonohydrat* in bester Ausbeute abscheidet. Auch größere Mengen Harnsäure können so bequem umgesetzt werden. Das Rohprodukt ist für weitere Umsetzungen ausreichend rein, kann übrigens von ein wenig eingeschlossener Harnsäure durch Umkristallisieren aus Wasser bequem gereinigt werden.

Die Reaktion ist nicht ohne Interesse. Wie in der vorhergehenden Arbeit gezeigt worden ist, wirkt Chlor auf Harnsäure in Gegenwart von Eisessig nicht ein. Wird dem Eisessig dabei aber ein Mol Wasser — auf die Harnsäure berechnet — zugesetzt, so entsteht 5-Chlorpseudoharnsäure. Werden mehr als 3 Mole Wasser genommen, so setzt sich diese mit dem Wasserüberschusse um, und es bildet sich Alloxan.

Wir verfahren folgendermaßen. In einem 0,6 Liter fassenden Erlenmeyerkolben, dessen Kork ein bis fast zum Boden reichendes Gaseinleitungsrohr und ein kurzes Rohr zum Austritt der Gase trug, wurden 100 g fein zerriebene Harnsäure mit einem siedenden Gemische von 300 ccm Eisessig und 50 ccm Wasser — d. h. fast 5 Mole — übergossen. Dann wurde unter dauerndem, lebhaftem Umschütteln aus einer Stahlflasche mit Drosselventil Chlor in stürmischem Strome angeleitet. Das Chlor tritt dabei fast völlig in Reaktion; durch die an und für sich nicht große Umsetzungswärme bleibt die Temperatur der Mischung genügend hoch, namentlich, wenn der Kolben

¹⁾ H. Biltz, Ber. d. d. chem. Ges. 45, 3678 (1912).

säure und zweckmäßig ein Präparat von möglichst fein verteilter Harnsäure, das man sich durch Umkrystallisieren von Harnsäure aus konz. Schwefelsäure mittelst Zugabe von Wasser herstellt.

Zu diesem Zwecke werden 100 g Harnsäure mit 250 ccm konz. Schwefelsäure in einer Reibschale verrieben, und der dünne Brei dann in einem 1 Liter-Erlenmeyerkolben 15–20 Minuten auf siedendem Wasserbade unter häufigem Umschütteln erhitzt, bis sich fast alles zu einer bräunlichen Lösung löst. Filtration durch Asbest ist kaum erforderlich. Die auf Zimmertemperatur abgekühlte Lösung wird langsam unter Umrühren in 2 Liter Wasser gegossen. So entstehen äußerst dünne Täfelchen von meist rechteckigem Umrisse, von denen die zwei längeren, parallelen Kanten vielfach etwas nach innen gekrümmt sind. Nach Trocknung bei 110° liegt ein sehr leichtes, glänzendes Pulver vor. Wir erhielten aus reiner käuflicher Harnsäure 96–98 Proz., aus roher Harnsäure 93–95 Proz. Ausbeute. Rohre Harnsäure wird dabei nicht entfärbt.

Zur Überführung in Alloxaanmonohydrat werden von der so vorberipiteten Harnsäure 25 g mit 75 ccm warmem Eisessig und 12 1/2 ccm Wasser durch einen stürmischen Strom Chlor oxydiert. Der Versuch dauert 4–7 Minuten. Dann wird gekühlt, abgesaugt, und das fertige Präparat vorgezeigt. Ein Teil kann in der früher beschriebenen Weise in Alloxantin¹⁾, ein anderer in Dialursäure²⁾ übergeführt werden.

Notiz über das Umkrystallisieren von Harnsäure und von methylierten Harnsäuren aus konz. Schwefelsäure.

Einige Harnsäuren lassen sich leicht umkrystallisieren, wenn man ihre Lösungen in wenig konz. Schwefelsäure reichlich mit Wasser verdünnt. Da sie dabei zum Teil charakteristische Kryställchen geben, kann man die

¹⁾ H. Bilts, Ber. d. d. chem. Ges. 45, 3673 (1912).

²⁾ H. Bilts u. P. Damm, Ber. d. d. chem. Ges. 45, 3664 (1912).

erhaltenen Krystallformen gelegentlich zur Identifizierung benutzen, was ganz erwünscht ist, da Harnsäuren in ihren Eigenschaften vielfach wenig Charakteristisches bieten. Voraussetzung ist, daß die betreffende Harnsäure rein vorliegt; Gemische von Harnsäuren lassen sich so nicht aufklären. Auch sonst ist bei der Deutung Vorsicht am Platze.

Zweckmäßig verreibt man 0,03–0,05 g der zu prüfenden Harnsäure in einem kleinen Probiergläschen mit etwa 8 Tropfen konz. Schwefelsäure unter Zuhilfenahme eines Glasstäbchens und erwärmt auf 40–50°. Die klare Lösung wird unter Umrühren in etwa 5 ccm Wasser getropft. Man sieht dann unter dem Mikroskope bei

Harnsäure: rechteckige oder quadratische Täfelchen, die vielfach an den zwei längeren Seiten etwas nach innen gekrümmt sind;

*3-Methylharnsäure*¹⁾: meist lanzettliche Blättchen;

1,3-Dimethylharnsäure: derbe Nadeln, die meist zu Büscheln vereinigt sind. Schmelzpunkt etwa 410° (nicht korr.), Zersetzung;

1,7-Dimethylharnsäure: meist sechsseitige Täfelchen. Schmelzpunkt etwa 387° (nicht korr.) unter Zersetzung;

3,9-Dimethylharnsäure: Blättchen von rhombischem Umrisse;

1,3,7-Trimethylharnsäure: feine lange Nadeln. Die Krystallabscheidung erfolgt meist langsam. Schmelzp. 345° (k. Th.) unter Zersetzung und Bräunung;

Tetramethylharnsäure blieb bei der beschriebenen Behandlung in Lösung;

1-Methylharnsäure, *7-Methylharnsäure* und *3,7-Dimethylharnsäure* selen amorph an.

Zweckmäßig vergleicht man mit einem Präparate der erwarteten Harnsäure, das in gleicher Weise umkrystallisiert ist.

¹⁾ Vgl. die viertfolgende Arbeit über α -, β - und δ -Methylharnsäure.

FILE DESCRIPTION
PHILADELPHIA FILE

SUBJECT HARRY GOLD

FILE NO. 65-4307

VOLUME NO. 1-B-5

SERIALS (29-1)

thru

(29-21)

1 B5 CONTINUED NEXT Packet

NOTICE

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File No: 15-4307Re: Harry GoldDate: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
-	6/3/50	BULKY EXHIBIT INVENTORY	3	3	
29(1)	6/3/50	BOOKLET W/WRAPPER ADDRESSED TO OSCAR VAGO-6607 79th ST. N.Y.	-	-	NOT COPIED - SEE ATTACHED SHEET RE. PUBLIC SOURCE DOCUMENT
29(2)	6/5/50	SIGNED STATEMENTS BY HARRY GOLD	13	13	
29(3)	6/3/50	INDEX CARDS CONTAINING INFO. ON SEVERAL PERSONS	26	26	
29(4)	6/8/50	SA LETTER TO SAC ANALYSIS OF SEARCH MATERIAL	2	2	
29(4)	6/23/50	SA LETTER TO SAC	1	1	
29(4)	6/3/50	BIOGRAPHICAL SKETCH RE. JACK BRUIN	1	1	
		INVENTORY CONTINUED ON			
		NEXT PAGE			

3

File No: 65-4307

Re: Harry Gold

Date: _____
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
29 (12)	6/8/50	SA let to SAC re analysis of Gold residence search material	1	1	
" "	6/23/50	SA let to SAC describing a poem written by Gold	1	1	
" "	6/3/50	a small sheet of paper containing the above poem	2	2	
" (13)	6/3/50	Envelope with return address of "The Provident Savings Bank & Trust Co"	1	1	
" "	6/3/50	Harry Gold's Bank statement with 7 checks	12	12	
" (14)	6/3/50	Envelope with return address of "The Provident Savings Bank & Trust Co"	2	2	
" "	6/3/50	Harry Gold's Bank statement with 15 checks	20	20	
" (15)	—	missing	—	—	
" (16)	6/3/50	Envelope with return address of "Fed. of Arch, Surv., Chem. & Tech." etc	1	1	
" "	6/3/50	let dated 10/31/38 to Mr. Scifide from A. N. Gibson - front & back	2	2	
" (17)	—	missing	—	—	

File No: 65-4307

Re: Harry Gold

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
(7)	no date		1	1	
(8)	6/3/50		1	1	
29 (18)	no date	Manila envelope re "Daniel Kline"	1	1	
" "	6/23/50	SA let to SAC re "Daniel Kline"	1	1	
	6/8/50	SA let to SAC re: Search -	16	16	
(1)	no date	(2 pages)	2	2	
(2)	6/3/50	(2 pages)	2	2	
(3)	no date		1	1	
(4)	6/2/50		1	1	
(5)	no date		1	1	
(6)	no date		1	1	
(9)	no date		1	1	

①

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 1B5

PHILADELPHIA FILES

INVENTORIED BY jan

REVIEWED BY PP

File No: 65-4307

Re: Harry Gold

Date: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
29 - (5)	6/26/50	SA let to SAC re letter from A. Brothman to Harry Gold	2	2	
"	6/7/50	SA let to SAC re description of Brothman's let to Gold	1	1	
"	8/8/45	A. Brothman's let H. Gold	3	3	
"	(6) 6/3/50	Folder # 3 white sheets containing numbers	4	4	
"	(7)	MISSING	—	—	
"	(8) 7/13/50	SA let to SAC describing H. Gold's address book	4	4	
"	" 6/3/50	H. Gold's address book	11	11	COPIED ONLY PAGES WITH MARKINGS; all others are blank
"	(9) 6/3/50	Letterhead stationery from "Terry + Siebert"	2	2	
"	(10)	missing	—	—	
"	(11) 6/7/50	SA let to SAC describing a small white card	1	1	
"	" 6/12/50	cover envelope & white envelope	2	2	
"	" 6/5/50	a small white card written on both sides	2	2	illegible - best copy

File No: 65-4307Re: Harry GoldDate: _____
(month year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
29 (12)	6/8/50	SA let to SAC re analysis of Gold residence search material	1	1	
"	"	6/23/50 SA let to SAC describing a poem written by Gold	1	1	
"	"	6/3/50 a small sheet of paper containing the above poem	2	2	
"	(13)	6/3/50 Envelope with return address of "The Provident Savings Bank & Trust Co"	1	1	
"	"	6/3/50 Harry Gold's Bank statement with 7 checks	12	12	
"	(14)	6/3/50 Envelope with return address of "The Provident Savings Bank & Trust Co"	1	1	
"	"	6/3/50 Harry Gold's Bank statement with 15 checks	34	34	
"	(15)	— missing	—	—	
"	(16)	6/3/50 Envelope with return address of "Fed. of Arch., Eng., Chem. & Tech." etc	1	1	
"	"	6/3/50 let dated 10/31/38 to Mr. Scipione from G.N. Gibson - front & back	2	2	
"	(17)	— missing	—	—	

File No: 65-4307

Re: Harry Gold

Date: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
29 - (18)	6/23/50	SA let to SAC re "P. S. Co."	1	1	
" "	6/17/50	Typewritten & handwritten reports "P. S. Co."	2	2	
" "	6/27/50	SA let to SAC re "Recovery of CO ₂ From Flue Gas"	1	1	
" "	6/18/50	Typewritten & handwritten reports "Recovery of CO ₂ From Flue Gas"	4	4	
" "	6/27/50	SA let to SAC re "Work to be Done on Flue Gas"	1	1	
" "	6/18/50	Typewritten & handwritten reports "Work to be Done on Flue Gas"	11	11	
" "	6/23/50	SA let to SAC re "Penna. Sugar Co."	1	1	
" "	6/17/50	Typewritten & handwritten reports "Penna. Sugar Co."	2	2	
" "	6/27/50	SA let to SAC re "Specific Gravity Table"	1	1	
" "	6/3/50	Photostat copy re "Specific Gravity Table"	1	1	
" "	6/8/50	SA let to SA re "Analysis of Gold Residence Search Material"	11	11	

⑤

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 165

PHILADELPHIA FILES

INVENTORIED BY jan

REVIEWED BY PIP

File No: 65-4307

Re: Harry Gold

Date: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
29- (18)					
(1)	6/3/50		1	1	
(2)	6/3/50	blank sheet	-		
(3)	6/3/50	blank sheet	-		
(4)	6/3/50	blank sheet	-		
29- (18)	6/8/50	SA let to SAC re "Analysis of Gold Residence Search Material"	10	10	1 DUP
" "	6/27/50	SA let to SAC re "Report on Letters From MIT"	2	2	material pertaining to this document have control numbers placed on back
"		miscellaneous			
(1)	6/18/50		1	1	
(2)	6/3/50		1	1	
(3)	6/18/50		1	1	
(4)	6/3/50		1	1	

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 185

PHILADELPHIA FILES

INVENTORIED BY jan

REVIEWED BY PLP

File No: 65-4307

Re: Harry Gold

Date: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
(5)	6/18/50		1	1	
(6)	6/3/50		1	1	
(7)	6/18/50		1	1	
(8)	6/3/50		1	1	
(9)	6/18/50		1	1	
(10)	6/3/50		1	1	
(11)	6/18/50		1	1	
(12)	6/3/50		1	1	
(13)	6/18/50		1	1	
(14)	6/3/50		2	2	
29-18	6/27/50	SA let to SAC re "Philadelphia Navy Yard News" etc.	2	2	
" "	6/27/50	Duplicate of above let.	2	2	DUP-2

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 185

PHILADELPHIA FILES

INVENTORIED BY Jan

REVIEWED BY PLP

File No: 65-4307

Re: Harry Gold

Date: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
(1)	6/18/50		1		
(2)	6/3/50		1		
(3)	6/18/50		1		
(4)	6/3/50		1		
(5)	6/18/50		1		
(6)	6/3/50		1		
(7)	6/18/50		1		
(8)	6/3/50		2		
29- (18)	6/27/50	SA let to SAC re "Lanolin"	1		
" "	6/8/50	SA let to SAC re "Analysis of Gold Residence Search Material"	4		
" "	6/18/50	Typewritten + handwritten reports re "Lanolin"	2		

File No: 65-4307

Re: Harry Gold

Date: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
29 - (18)	6/18/50	Typewritten + handwritten reports re 2nd pg to "Lanahie"	2		
" "	6/27/50	SA let to SAC re "Clayton Continuous Soap-making Process"	1		
" "	6/8/50	SA let to SAC re "Analysis of Gold Residence Search Material"	2		
" "	6/18/50	Typewritten + handwritten reports re soap making	2		
" "	6/27/50	SA let to SAC re "Amylo Process"	1		
" "	6/8/50	SA let to SAC re "Analysis of Gold Residence Search Material"	5		Material pertaining to this material have control number on back
		Control number on front			
(1)	6/18/50		1		
(2)	6/3/50		1		
(3)	6/18/50		1		
(4)	6/3/50		1		
(5)	6/18/50		1		

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 1B5

PHILADELPHIA FILES

INVENTORIED BY yan

REVIEWED BY PIP

File No:

65-4307

Re:

Harry Gold

Date:

3/78

(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
(6)	6/3/50		1		
(7)	6/3/50		1		
(8)	6/18/50		1		
(9)	6/3/50		1		
29 - (18)	6/8/50	SA let to SAC re "Analysis of Gold Residence Search Material"	7		
" "	6/23/50	SA let to SAC re "Financial & Social History of the Gold Family"	2		
		Control number on back			
(1)	6/17/50		1		
(2)	6/3/50		1		
(3)	6/16/50		1		
(4)	6/3/50		1		
(5)	6/16/50		1		

10

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 105

PHILADELPHIA FILES

INVENTORIED BY jan

REVIEWED BY PIP

Date: 3/78
(month/year)

File No: 65-4307

Re: Harry Gold

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
(6)	6/3/50		1		
(7)	6/16/50		1		
(8)	6/3/50		1		
(9)	6/16/50		1		
(10)	6/3/50		1		
29 (18)	no date	manila envelope "Carl Buchman"	1		
"	"	SA let to SAC re "Carl Buchman"	1		
"	"	2 Duplicate of above let	2		DUP 2
"	"	SA let to SAC re "Leo C. Penn"	1		
"	"	Typewritten + Handwritten reports re "Carl Buchman"	2		
"	"	Typewritten + Handwritten reports re "Leo C. Penn"	2		
"	"	no date manila envelope re "Herbert Epstein"	1		

11

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 1B5

PHILADELPHIA FILES

INVENTORIED BY JP

REVIEWED BY RP

File No: 65-4307

Re: Harry Gold

Date: 3/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
J.9 (18)	6/8/50	SA let to SAC re "analysis of Gold Residence Search material"	15		
" "	6/23/50	SA let to SAC re "Herbert Epstein"	3		
" "	"	2 Duplicates of above let.	6		DUP-2
(1)	no date	(2 pages)	2		
(2)	6/3/50		1		
(3)	6/3/50		1		
(4)	no date		1		
(5)	6/3/50		1		
(6)	no date		1		
(7)	6/3/50	(2 pages)	2		
(8)	no date		1		

12

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 1B5

PHILADELPHIA FILES

INVENTORIED BY jan

REVIEWED BY PLP

File No: 65-4307

Re: Harry Gold

Date: 5/78
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
(9)	6/3/50		1		
(10)	no date		1		
(11)	6/3/50		1		
(12)	no date		1		
(13)	6/3/50		1		
(14)	no date		1		
(15)	6/3/50		1		
(16)	no date		1		
(17)	6/3/50	(2 pages)	2		
(18)	no date		1		
(19)	6/3/50		1		
(20)	no date		1		

13

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 1B5

PHILADELPHIA FILES

INVENTORIED BY jan

REVIEWED BY PR

Date: 3/78
(month/year)

File No: 65-4307

Re: Harry Gold

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b) (3) cited)
			Actual	Released	
(21)	6/3/50		1		
(22)	no date		1		
(23)	6/3/50		1		
29 (18)	no date	Manila envelope re "Joseph Schulz"	1		
" "	6/23/50	SA let to SAC re "Joseph Schulz"	1		
		Control number on back			
(1)	no date		1		
(2)	6/3/50		1		
(3)	no date		1		
(4)	6/3/50		1		
(5)	no date		1		
(6)	6/3/50		2		

File No: 65-4307

Re: Harry Gold

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
(7)	no date		1		
(8)	6/3/50		1		
29 (18)	no date	Manila envelope re "Daniel Kline"	1		
" "	6/23/50	SA GE to SAC re "Daniel Kline"	Exc 16 1		
(1)	no date	(2 pages)	2		
(2)	6/3/50	(2 pages)	2		
(3)	no date		1		
(4)	6/2/50		1		
(5)	no date		1		
(6)	no date		1		
(7)	no date		1		

15

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 185

PHILADELPHIA FILES

INVENTORIED BY gma

REVIEWED BY prl

Date: 3/78
(month/year)

File No: 65-4305

Re: Harry Gold

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
(8)	6/3/50		1		
(9)	no date		1		
(10)	6/3/50		1		
(11)	no date		1		
(12)	6/3/50		1		
(13)	no date		1		
(14)	6/3/50	Front & Back	2		
(15)	no date		1		
(16)	6/3/50		1		
(17)	no date	(2 pages)	2		
(18)	6/3/50		2		
(19)	no date		1		

16

Inventory Worksheet
FD-503 (2-18-77)

VOLUME 185

PHILADELPHIA FILES

INVENTORIED BY jar

REVIEWED BY pu

Date: 3/78
(month/year)

File No: 65-4307

Re: Harry Gold

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
(20)	6/3/50		1		
(21)	no date		1		
(22)	6/3/50		1		
(23)	no date		1		
(24)	6/3/50	front & back	2		
(25)	no date		1		
(26)	6/3/50	front & back	2		
29 (19)	6/8/50	SA let to SAC re "Gold Residence Search Material"	1		
" "	6/3/50	Reprint from Chemical & Metallurgical Engineering Magazine	6		
29-(20)	6/23/50	SA let to SAC re torn page from address	2		
" "	6/3/50	Two torn pages from H. Gold's address book	2		best copy available
29-21	6/3/50	Pieces of Train ticket	1		

PUBLIC SOURCE DOCUMENTS
65-4307-1-B-5

1. serial 18- "FROM DOUBLE EAGLE TO RED FLAG"
General P.N. Krassnoff
Translated from the Second Russian Edition
by Erik Law-Gisiko
Blue Ribbon Books, NY copyright-1926 852 pgs.
2. serial 19- "GENESEE FEVER"
Carl Carmer
Farrar & Rinehart Inc., NY
copyright-1941 360 pgs.
3. serial 20- "THE TWILIGHT OF WORLD CAPITALISM"
William G. Foster
International Publishers, NY
copyright-1949 168 pgs.
4. serial 21- "NOTES FROM THE GALLOWS"
Julius Fuchik
New Century Publishers, NY
copyright-1948 112 pgs.
5. serial 23- "MICROBE HUNTERS"
Paul de Kruif
Harcourt, Brace & Company
Pocket Books Inc, NY
copyright-1926 400 pgs.
6. serial 29-1 -"POLITICAL AFFAIRS"
June 1947
New Century Publishers
832 Broadway NY,NY
7. serial 38- "TEN YEARS OF THE COMMUNIST INTERNATIONAL"
I. Komor
Workers Library Publishers
35 East 125th St. NY,NY
March 1929 46 pgs.
8. serial 49- "CHEMICAL EQUIPMENT REVIEW"
July 1942
Putman Publishing Company
737 N. Michigan Ave.
Chicago, Ill. 72 pgs.

continued...

PUBLIC SOURCE DOCUMENTS continued...

9. serial 50- "ACHIEVEMENT"
Tri-State College Bulletin
September 1937 vol 54 60 pgs.
10. serial 51- "FOOD INDUSTRIES"
McGraw-Hill Publishing Company
Albany, New York
March 1940, Vol 12/Number 3 140 pgs.
11. serial 56- "THE FUTURE"
February 1916
Published Forwards Association
(in Hebrew) 109 pgs.
12. serial 55- "INDUSTIAL & ENGINEERING CHEMISTRY"
Acetic Anhydride
Reinhold Publishing Corp. NY
October 20, 1935 16 pgs.
13. serial 57- "HEALTH & HYGIENE"
March 1936
H & H Publishing
copyright-1935 Union Square, NY 34 pgs.
14. serial 58 & 59- DEPARTMENT OF ENGINEERING RESEARCH
University of Michigan, Ann Arbor
"DUST-REMOVAL EFFICIENCY OF SCHNEIBLE
MULTI-WASH DUST COLLECTOR"
by Hugh E. Keeler
Project # 1M72
Claude B. Schneible Co. Chicago, Ill.
July-December, 1936 8 pgs.
15. serial 60- "CATALYST"
Arthur H. Thomas Co.
Vol 18, Number 6 25 pgs.
16. serial 61- "CATALYST"
October 1933 21 pgs.
17. serial 62- "CATALYST"
Late Summer Directory Issue
1932 25 pgs.

PUBLIC SOURCE DOCUMENTS continued...

18. serial 68- "TALES TOLD IN LONG HOUSE"

Fifteen selected Indian legends as handed down
in the folk lore of the Iroquois for your reading
with the compliments of
THE CARBORUNDUM COMPANY
Niagra Falls, New York

BULKY EXHIBIT

Date received 6-3-50

HARRY GOLD

RSP R

(Title of case)

Submitted by Special Agent E.A. Pett & Thomas F. Carrig

Source from which obtained Home of Joseph Gold

Address 6823 Kindred Ave., Phila, Pa.

Purpose for which acquired Evidence

Location of bulky exhibit Bulky Exhibit Room

Estimated date of disposition 12-1-50

Ultimate disposition to be made of exhibit to be determined

RETIPOD

List of contents:

1. Jacket file folder entitled "Flue Gas from Smelters" containing misc notes & other material. (*sent Feb 6-12-50, dated 7-18-50*)
2. Airmail envelope & ltr to Harry Gold postmarked Mar 18, 1949, Los Angeles, Calif.
3. Ltr to Harry Gold from Pvt Wm. J. Murphy postmarked Roswell, New Mexico Sept 24, 42.
4. Jacket file folder containing misc notes identified by PCB & FFB. (*sent Feb 6-12-50, dated 7-18-50*)
5. Manila envelope of Eastman Kodak Co., Rochester, NY with name Al Slack Bldg. 110 on front containing photographs. (*sent Feb 6-12-50, dated 7-18-50*)
6. Copy of The Worker dtd Mar 7, 1943.
7. Envelope addressed to Harry Gold postmarked Boston, Mass Oct 4, 1949
8. Piece of notepaper with name Mr. Theodore Kapala, et al.
9. Piece of paper towel with name of Dr. E. E. Meyers, et al.
10. Paper card with name Dr. E. L. Beckman, etc.
11. Ltr addressed to Harry Gold from Theo B. Krouse, postmarked A...ington, Pa. Aug 22, 49
12. Four photostats in German identified by TFC.
13. Notepaper re: Paul Starcher.
14. Ltr without envelope to Dear Harry: from Your pal, Doc dtd May 24, 46. *25-43 07-1-05*
15. United Air Lines time table effective Apr 28, 1946.
16. Postcard with name J. H. Bowen, etc.
17. Manila envelope marked J. H. Bowen's Job, containing misc papers.
18. Book entitled "From Double Eagle to Red Flag," by General Krassnoff.
19. Book entitled "Genesee Fever" by Carl Carner. (*sent Feb 6-12-50, dated 7-18-50*)

SEARCHED.....	INDEXED.....
SERIALIZED.....	FILED.....
NOV 27 1951	
FBI - PHILADELPHIA	
19A	

Set 29 only in this packet

Return 11/14/58
Return 8/3/67
Return 11/15/57
Return 9/27/60
Return 11/3/69

20. Book entitled "The twilight of World Capitalism" by William Z. Foster.
21. Book entitled "Notes from the Gallows" by Julius Fuchik.
22. Ltr in German signed by B. Heiler.
23. Pocket Book entitled "Microbe Hunters" by Paul deKruif.
24. Two match books from Seattle, Wash.
25. Card of Anton B. Tokarski.
26. Reading RR ticket envelope containing Pullman stub tickets and Theatre Tickets.
27. A 1947 Pocket Dairy book.
28. Four photostats in German identified by TFC.
29. Red Fibre Folder containing miscellaneous blueprints, correspondents and notes identified by FCB. *(from sub 6-12-57) (also 2 1/2" x 3 1/2" photo of 7-27-57) (also 7-18-57) (also 7-11-57)*
30. One piece of paper with name Mrs. Sarah Pecker.
31. One piece of paper with name S. M. Snyder.
32. Ltr addressed Dear Harry from Ed dtd 2-1-48.
33. Check on National City Bank of NY dated 11-29-47 signed S. Brothman, also similar checks dtd 12-13-47 & 1-3-48.
34. Ltr addressed Harry Gold and Philip Levine signed Miriam in envelope from Brothman & Moskowitz, Basil Switzerland.
35. Ltr 16 pages addressed to Harry Gold and Philip Levine signed SER in envelope from Mr. A. Brothman, Basel, Switzerland.
36. Ltr. to Harry Gold from Levine postmarked Flushing N. Y. Oct 27, 1948.
37. Envelope containing Statement of Salary Due. Envelope from Newhouser Hotel Salt Lake City, Utah.
38. Small Book entitled "Ten Years of the Communist International by I. Komor.
39. Envelope addressed Harry Gold from Jean 1841 S. Alden St. Phila. Postmarked Phila March 31, 1948.
40. Airmail ltr to Harry Gold from Mrs. Dr. Green, Los Angeles, Calif, postmarked Feb 2, 48.
41. Ltr to Harry Gold from Oscar J. Vags postmarked NY June 30, 1948.
42. Ltr to Harry Gold from Philip Levine postmarked Storrs, Conn. July 30, 1948.
43. Ltr to Harry Gold from Philip Levine re retaining Robert Hoffman, Atty. postmarked Flushing NY Sept 15, 1948.
44. Ltr without envelope to Harry from Phil dtd Aug 30, 1948 enclosing statement re back Salary due Gold and Levine from A. Brothman.
45. Ltr without envelope to Harry and Butch from Doc dtd Nov 15, 1945.
46. Purse calendar containing 3x5 white paper.
47. Envelope postmarked Far Rockaway July 23, 1931 from Cottman.
48. Loose leaf Spiral notebook of University of Penn.
49. Magazine entitled "Chemical Equipment Preview July 1942 containing name Art Simmers.
50. Tri State College Bulletin Sept 1937 Vol 54 #3.
51. Magazine food Industried March 1940.
52. White paper containing pencil notes.
53. Three yellow sheets containing names and addresses.
54. Selective Service return envelope Local Bd #65.
55. Magazine Industrial Engineering Chemistry Vol 27 #35.
56. Jewish language magazine bearing word Future Feb 1916.
57. Magazine Health and Hygiene March 1946.
58. Dept Eng Research Magazine.
59. University of Michigan Bulletin Dec. 1936.
60. Catalyst Vol 18 NO6, June, July 1933.

61. Catalyst Oct. 1933.
62. Catalyst Vol 17, No 7, 1932.
63. Little Red Book year 1948.
64. Post card from M. Rabacchi to Harry Gold Postmarked 4-14-49.
65. Card to A. F. Byron, Immis, Speiden & Co.
66. One bunch of 3x5 cards with names and addresses--37 cards.
67. Letter without envelope to Harry from Marion dtd Oct 27, 45.
68. Pamphlet entitled Sales told in the Long House , Niggara Falls, New York.
69. Envelope containing 12 papers and business cards.

(In pencil)

Thomas Black

I visited T. b. this week at the hospital and conveyed our sympathies & regrets & told him that you we hoped for his speedy recovery. I also that we all was well & he that he should not worry. Tom wishes to thank you for your offer of any possible assistance, but says that he is we very well taken care of & at present desires nothing. To ——— thank you for sending this ——— to him. He says he can rest much easier now that he is assured that we know of his whereabouts & situation.

His arm is healing very slowly especially on the under side where it was very deeply burned & the blood serum still comes as no skin has yet formed there. As soon as all his wounds are covered with a layer of skin he will be released from the hosp. but this is not likely to be for at least a month - possibly longer. Even then he will need special care and treatment & it will be at least a year before to complete the healing of the wounds & to restore the use of the shoulder & elbow muscles which have not been used for so long. I—— it will be about a year before he is fully recovered.

(Reverse side)

(In ink)

This is a rough draft of a report submitted to one of my Soviet contacts whom I knew as Fred. The date was about June, 1938. This report was prepared because Black was also working for the Soviets and I knew that the Soviets would want to know of his (Black's) whereabouts.

/s/ Harry Gold
Philadelphia, Penna.
June 5, 1950

Witnessed

T. B. Miller, Jr.
June 5, 1950
Phila., Pa.

Richard E. Brennan
Special Agent, F.B.I.
June 5, 1950
Philadelphia, Pa.

65-4307-1-B-5 (29-2)

(In pencil)

To return call Kearny 2-1700 from _____
_____ (hosp. ?) to get a cab.

(In ink)

/s/ Harry Gold
Philadelphia, Penna.
June 5, 1950

Witnessed:

T. S. Miller, Jr.
June 5, 1950
Phila., Pa.

Richard E. Brennan
Special Agent, F.B.I.
June 5, 1950
Philadelphia, Pa.

(In pencil)

(1)

T. B.

One of our mutual f's T. B. is in the U. H. H. in Kearny, N. J. ~~in the hoop.~~ from burns of the face & the entire left arm and back. He was inj. 10 wks. ago in an accident when on some of the ~~(exp. 7)~~ which he was employ. in the lab. in which he was working. I disc. his plight when I called to inf. him of my chgo. of address. His face has entirely healed though still tender & skin is beginning to form on his arms. I want to see him last Saturday, May 14, but he will probably be at least a month longer in the hoop. He is in the U. H. H., Kearny, N. J. & she is receiving best possible care, etc. He has a private room. He can be visited at any reasonable hr. Even then when he is released he will not have the complete use of his arm for at least a yr.

(Reverse side)

(In ink)

This is a rough draft of a report I submitted to one of my Soviet contacts whom I knew as Fred. The date was about May or June of 1933. This report was prepared because Black was also working for the Soviets and I knew that the Soviets would want to know of his (Black's) whereabouts.

/s/ Harry Gold
Philadelphia, Penna.
June 5, 1950

Witnessed:

T. S. Hiller, Jr.
June 5, 1950
Phila., Pa.

Richard E. Brennan
Special Agent, F.B.I.
June 5, 1950
Philadelphia, Pa.

(In pencil)

Thomas Black

I visited Thomas Black this week at the hospital.

(In ink)

/s/ Harry Gold
Philadelphia, Penna.
June 5, 1950

Witnessed:

T. S. Miller, Jr.
June 5, 1950
Phila., Pa.

Richard E. Brennan
Special Agent, F.B.I.
June 5, 1950
Philadelphia, Pa.

(In pencil)

T. L. B.

I saw T. L. B. Sun. His arm is very much better than it was several weeks ago, but healing is still slow and he will probably be in the hosp. till the end of July. Tom says that he has seen several members of the "org." have been to visit him. He has a great number of visitors from the plant especially after working hrs. & on Sat. & Sun. so he says the best time to see him would be Relative to seeing him

Location of hosp. -

It is the East Buds. Hosp. in Kearny, N. J. an industrial town between Newark & J. C. The address is 206 Do— Ave. El. has a private room with a phone in it. The hosp. no. is Kearny 2-3100 and then one asks ext. 25 which is Black's no. (or just ask for Mr. Black).

The best and quickest way to get to the hosp. is to take a Penna. train to Newark and a taxi from there (cost about 85 cents) to the hosp. in Kearny. A bus from Newark would take considerably an hour or more.

Visiting Hrs.

Tom can be seen at any time between 9 A.M. and 9 P.M. but he says the best time would be on a week day at 10:30 A.M. During the aft. the fellow who is doing his work at the plant often comes early.

(Reverse side)

(Still in pencil)

His room number is 203. The procedure is to ask at the office to see him and they will direct you to the room.

(In ink)

This is a rough draft of report I submitted to one of my Soviet contacts whom I knew as Fred. The date was about June, 1933. This report was prepared because Black was also working for the Soviets and I know that the Soviets would want to know of his (Black's) whereabouts.

/s/ Harry Gold
Philadelphia, Penna.
June 5, 1950

Witnessed

T. A. Miller, Jr.

June 5, 1950

Phila., Pa.

Richard E. Brennan

Special Agent, F.B.I.

June 5, 1950

Philadelphia, Pa.

66-4307-1-135(2/2)

T. Jones Black.

I visited T. J. this week at the Hospital
& conveyed our sympathies & I got
and told him that you had for
his speedy recovery. I also that
was well & that he should not
worry. You wished to thank you for
your offer of any possible assistance
but says that he is ~~not~~ very well

^{at present} ~~nothing~~
^{to be done} ~~at present~~ ^{nothing}
He says ^{that} ~~he~~ ^{is} ~~not~~ ^{well} ~~at~~ ^{present} ~~nothing~~
can be done ^{at present} ~~nothing~~
his arm is ~~not~~ ^{healing} ~~very~~ ^{slowly}

especially on the ~~underside~~ ^{where}
was very deeply ~~burned~~ ^{the blood}
remains still ~~open~~ ^{as} ~~the~~ ^{blood}
formed there. As soon as all the
wounds are covered with a ^{layer}
of skin he will be released ^{but} ~~this~~
is not likely to be for at least ~~6~~
months - possibly longer. ~~Even then~~
he will need special ~~care~~ ^{& treatment}
~~to complete the healing of the wounds~~
& to restore the use of the shoulder
& elbow muscles which had not been
used for so long. ~~But~~ ^{it} ~~will~~
~~be~~ ^{before} ~~he~~ ^{is} ~~fully~~ ^{released}.

66-4307-1-135(2)

6/19/50
28
50

This is a rough draft of a report I submitted to one of my Soviet contacts whom I knew as "Fred." The date was about June 1938. This report was ~~not~~ ^(H-9) revealed to Carol Black was ^{also working} ~~also~~ ^{for the Soviets} and I knew that ^(H-9) ~~she~~ ^{she} would want to know of his (Black's) whereabouts.

Harry Gold
Philadelphia, Penna.
June 5, 1950.

Witnessed:

G. J. Miller, Jr.
June 5, 1950
Phila., Pa.

Richard E. Brennan
Special Agent, FBI
June 5, 1950
Philadelphia, Pa.

~~...~~
The person in 403. The procedure was
to take office to see him & they will take
you to the room
This is a rough draft of a report
submitted to one of my direct contacts who
I knew as "Fred". The date was about June
1950. The report was prepared because Mack
was also working for all direct and I
knew that ^{as well} Fred would never know of
this (black) info about.

Harry Gold
Philadelphia, Penna
June 5, 1950.

Returned:
J. J. Miller Jr.
June 5, 1950
Phila. Penna

Richard E. Brennan
Special Agent ABO
June 5, 1950
Philadelphia, Pa.

Thomas Black

I visited Thomas Black this week
at the hospital

Harry Gold
Philadelphia, Penna.
June 5, 1950.

Witnessed:

A. J. Miller, Jr.
June 5, 1950
Phila, Pa.

Richard E. Brennan
Special Agent, FBI
June 5, 1950
Philadelphia, Pa.

~~To return~~
To return call ~~at~~ ~~for~~ ~~Henry~~ 2-1700 for
are ~~not~~ to get a call

Harry Gold
Philadelphia, Penna.
June 5, 1950.

Witnessed:

J. S. Miller, Jr.
June 5, 1950
Phila, Pa.

Richard E. [Signature]
Special Agent, FBI
June 5, 1950
Philadelphia, Pa.

T. B.

one of our contacts for T.B. is in the

~~area of the [unclear] [unclear] [unclear]~~
camp, out of from [unclear] of the [unclear]

the left [unclear] of hand. He was [unclear]
10 weeks ago [unclear] with the [unclear]

which he was making. I [unclear] in flight
when I called to [unclear] him of my [unclear] of [unclear]

His face has [unclear] sealed, [unclear] still [unclear],
[unclear] in [unclear] to [unclear] on his [unclear]

I want to see him but [unclear] of [unclear]

but he will probably be at least a month
longer in the [unclear]. He is in [unclear] the W.H. [unclear]

10 away [unclear] and [unclear] [unclear] [unclear]
call [unclear] he has a [unclear] [unclear] [unclear] [unclear]

at any reasonable [unclear]

but [unclear] when he is released he [unclear]
not [unclear] the [unclear] [unclear] his [unclear]

at least a [unclear]

6/5/50
20
500

This is a rough draft of a report I submitted to one of my Soviet contacts whom I knew as "Fred". The date was about May or June of 1950. This report was prepared because Mack was also working for the Soviets and I knew that ~~the Soviets~~ would want to know of his (Mack's) whereabouts.

Harry Gold
Philadelphia, Penna

June 5, 1950.

Witnessed:

G. L. Miller, Jr.
June 5, 1950
Phila., Pa.

Richard E. Penman
Special Agent, FBI
June 5, 1950
Philadelphia, Pa.

Catherine Augousti

Year	Roll
① M.C.B. K-2	② U.T.S. 9. K-10
① D.M.H. K-5	④ R.C.K. K-2
① M.B. K-1	⑥ M.A.G. K-1
① R.T. K-10	⑦ H.K.B. K-2
① D.O.J. K-1	
② M.A.G. K-6	
① D.M.H. K-1	
① R.T. K-1	

65-4307-1-B-5(29-3)

^

many "Atlantic" Counties

Name	Code
① W. S. R. K-2-E	① W. W. K-2-E
② W. S. R. K-2-F	② J. S. B. D-1-E
③ W. S. R. D-1-E	③ H. B. K-2-E
④ J. S. B. K-2-E	④ S. S. P. K-2-E
⑤ L. S. P. K-2-F	⑤ A. H. H. K-2-F
⑥ A. H. H. K-2-G	⑥ C. A. K-2-E
⑦ W. W. K-2-H	⑦ G. L. K. D-2-H
⑧ A. Q. B. D-1-E	

Mary "Abbie" Caraldi

Home

Left

① A.L.K. D.18

② C.B.P. 6:04

③ S.R. K.0.1

④ M.J.M. K.0.2

⑤ H.K.R. 2.24

Champions

Nelly "Nelly" Harkin Town 1

XXXX

Luella "Luella" Pritchard Town 4

XXXX

Onothy "Onothy" Schuller Town 6

IIII

Catherine Bajewski Town 7

XXXX

Mary "Mary" Casaldi Town 8

XXXX

Anna "Anna" Katsstein Town 10

IIII

James M. King, District

Men

Boys

① H. A. KAY

① A. T. DIZ

② W. A. C. DIZ

② A. N. H. K. D. DIZ

③ E. J. D. KAY

③ W. A. C. K. D. DIZ

④ H. R. K. D. DIZ

④ A. T. K. D. DIZ

⑤ W. S. R. K. D. DIZ

⑤ D. T. D. DIZ

⑥ E. E. P. K. D. DIZ

⑥ W. M. D. DIZ

⑦ A. E. K. K. D. DIZ

⑦ A. N. H. K. D. DIZ

⑧ E. J. P. DIZ

⑧ A. N. H. K. D. DIZ

James Murray Diette

Wm

Foot

⑬ G.B.P. D. 12

Robert Johnson

Home

Work

① D.N.D. 112

A

ACT, Hauling Machine

Item	Unit
① U.T.S. Q. K-2	① E.S.P. K-3
① B.T. K-1	① D.O.S. K-14
① M.W. K-11	① C.D. K-5
① J.S.D. K-12	① M.A.S. K-14
① U.T.S. Q. K-2	① C.D. K-1
① M.A.S. K-5	① M.W. K-8
① H.R. K-4	① B.T. K-2
① S.T. K-2	

65-

4307-18-5 (89-6)

①

ser. 632, 051 ?
U.S. 2, 073, 938
U.S. 2, 063, 144
ser. 463, 991 ?

31, 130
31, 3174
31, 7016
31, 63774
32, 5953 (auxiliary)
32, 66697 ?
32, 55546

4/3/50
27.6

ser. 659, 988 ?

32, 6822
32, 67277 ?
33, 46007

U.S. 2, 154, 639 del!

33, 5618

ser. 675, 052 del!

33, 5552

U.S. 2, 142, 445

33, 3056

U.S. 2, 250, 485 (auxiliary) del!

33, 5945 ?

ser. 517, 948 ?

35, 70709
35, 70706

U.S. 2, 220, 033 del!

35, 1549

U.S. 2, 209, 216 del!

34, 54652

U.S. 2, 184, 934

35, 236 del!

ser. 705, 329 ?

35, 28629

36, 20505

	⊙	⊙	⊙	6/2/50
ser. 719, 675	?		37, 2105 ✓	700
ser. 708, 659			37, 3207 ✓	270
ser. 706, 792	?		37, 2398 ✓	
ser. 725, 277	?		37, 5735 ✓	

	<u>Total</u>	<u>Cure</u>
U.S. Patents	10 ✓	4
ser Patents	10 ✓	1
misc. Patents	2 ✓	0
abstracts (only)	8 ✓	7

~~577~~ - ~~3967~~ - ~~188~~ - ~~433~~ - ~~1051~~ - ~~1052~~ - ~~420~~ - 4078⁰
220² - 2146⁰ - 1055⁵ - 1248⁰ -

6/10/50
RHS
BTD

- U.S. 733,995 - Mar. 11-1943 - 1052⁴ - (38)
- U.S. 735,284 - Apr. 8 - 1943, ? - 2770² - (38)
- U.S. 2,344,918 - Mar. 21-1944, ? -
- U.S. 2,346,107 - Apr. 4-1944
- (Wm. S. Johnson to R & N Co.)

SAC

7/13/50

SA RICHARD E. BRENNAN

HARRY GOLD
ESPIONAGE - R

Exhibit 65-4307-1-B-5(29-8)

This exhibit, consisting of a small address book, was shown to GOLD on June 19, 1950.

GOLD identified the individuals whose names are contained therein as follows:

JOE AYLMER
Fairlawn, Ohio

GOLD said that AYLMER was a classmate of his at Xavier University, Cincinnati, Ohio.

THOMAS L. BLACK
17 Oxford St.
Newark, N. J.
Telephone Market 2-5581

BLACK has previously been identified by GOLD and BLACK is presently the subject of an active investigation in this office.

BILL CORNELLY
66 E. Dixon Ave.
Dayton, Ohio
Telephone Walnut 4212

GOLD said that CORNELLY was a classmate of his at Xavier University.

MORRELL DOUGHERTY
14711 Springfield Ave.
Philadelphia, Pa.

DOUGHERTY has previously been identified as having been a close friend of GOLD for years and a former fellow employee at Pennsylvania Sugar Co.

REB:DMH
65-4307

65-4307-1-B-5(29-8)

Memo, SAC

PH 65-1307

7/13/50

GILES DeCOURCY, JR.
1663 Glenway Ave.
Cincinnati, Ohio

GOLD said that DeCOURCY was a classmate of his at Xavier University.

DAN GUSSICK
1914 S. 5th St.
Philadelphia, Pa.

GOLD said that GUSSICK was a schoolmate of his in South Philadelphia.

CARTER HOOLESS
946 N. Delaware Ave.
Philadelphia, Pa.
(Penna. Sugar)

GOLD has previously stated on many occasions that HOOLESS, now deceased, was a former fellow worker of his at Pennsylvania Sugar Co.

JOHN KOREN
2263 N. Howard St.
Philadelphia, Pa.
Telephone Regent 2268
(D.D.)

GOLD said that KOREN formerly worked with him at the Pennsylvania Sugar Co.

VERA KANE
69 Wall St.
New York, N. Y.
(Care of Frazier, Spear, Kiddier & Mayers)

GOLD identified VERA KANE as a woman whose apartment he went to on two or three occasions with THOMAS L. BLACK and FERDINAND HELLEL. The information which GOLD supplied concerning VERA KANE upon being shown this name has previously been reported to interested offices.

Memo, SAC

PH 65-1307

7/23/50

FRANK KESSLER
2711 S. 7th St.
Philadelphia, Pa.

As has previously been determined, GOLD used the name FRANK KESSLER in many of his espionage activities. GOLD said that the FRANK KESSLER whose name appears in this book is a real person whose name GOLD used at first without remembering that he had formerly known an individual by this name. GOLD said that he kept this name in his address book for any contingency which might arise due to the fact that he was using this name upon occasion in his espionage activities.

ED _____
2530 S. Marshall St.
Philadelphia, Pa.

GOLD said that the last name of this individual is LIEBERMAN and that ED LIEBERMAN was a former schoolmate of his in Philadelphia.

AL SKALAR
1905 S. 5th St.
Philadelphia, Pa.

GOLD said that SKALAR was a former schoolmate of his in Philadelphia.

FANNY SILL
115 Marcy St.
Philadelphia, Pa.

GOLD said that FANNY SILL was a friend of one of his former girl friends by the name of SARA OKEN. OKEN has previously been identified during the course of investigation. GOLD said that he took FANNY SILL out upon one occasion in company with SARA OKEN.

Waco, SAC

PH 65-1307

7/13/59

ARTHUR L. SIMMERS
Room 111
Hotel Normandie
36th & Chestnut Sts.
Philadelphia, Pa.

SIMMERS, a former fellow employee of GOLD at Pennsylvania Sugar Co., has previously been identified during the course of investigation and information concerning him has been reported.

Dr. C. F. WHEELER
Cincinnati, Ohio
Telephone Kirby 2712

GOLD said that Dr. WHEELER was the Professor of English at Xavier University and had been one of GOLD's instructors at that place.

65-4307-1-B-5(29-8)

ADDRESSES		ADDRESSES	
Name		Name	<i>Dr. C. F. Walker</i>
Street		Street	
City		City	<i>Cincinnati, Ohio</i>
Telephone		Telephone	<i>Evans, 2712</i>
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	

ADDRESSES		ADDRESSES	
Name		Name	al shlar
Street		Street	19053 Fifth St.
City		City	Phila., Pa.
Telephone		Telephone	
Name		Name	Fanning 200
Street		Street	418 Indus. St.
City		City	Phila., Pa.
Telephone		Telephone	
Name		Name	Arthur F. Diamond
Street		Street	Hotel Normandie
City		City	Phila., Pa.
Telephone		Telephone	
Name		Name	Ann 411
Street		Street	26 25th St. Phila.
City		City	
Telephone		Telephone	

ADDRESSES		ADDRESSES	
Name		Name	Ed
Street		Street	2530 2 nd Marshall St.
City		City	Philadelphia, Pa.
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	

JULY 1951
 U.S. DEPT. OF JUSTICE
 FEDERAL BUREAU OF INVESTIGATION

ADDRESSES		ADDRESSES	
Name		Name	John Kessler
Street		Street	2263 N. Howard St.
City		City	Phila., Pa.
Telephone		Telephone	Regul 2262700
Name		Name	Wasa Kane
Street		Street	69 Wall St.
City		City	New York, N.Y.
Telephone		Telephone	
Name		Name	J. Frayden
Street		Street	2nd, Middle
City		City	and Midway
Telephone		Telephone	
Name		Name	Frank Kessler
Street		Street	2711 D. 7 St.
City		City	Phila., Pa.
Telephone		Telephone	

K
O
P
P
R
E
S
S
E
D

ADDRESSES		ADDRESSES	
Name		Name	<i>Don Hurrick</i>
Street		Street	<i>1914 1/2 E 7th St.</i>
City		City	<i>Phila., Pa.</i>
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	

IN THE CITY OF PHILADELPHIA

ADDRESSES		ADDRESSES	
Name		Name	Manuel Omgly
Street		Street	4711 Springfield Ave
City		City	Edinboro, Pa.
Telephone		Telephone	
Name		Name	Manuel Omgly
Street		Street	379 Salcher Lane
City		City	Providence, Pa.
Telephone		Telephone	648
Name		Name	Adwin Howard
Street		Street	
City		City	P. State
Telephone		Telephone	
Name		Name	Edna De Courcy
Street		Street	4111 Hillman Ave
City		City	Conemaugh, Ohio
Telephone		Telephone	

ADDRESSES		ADDRESSES	
Name		Name	<i>Bill Connelly</i>
Street		Street	<i>66 C. D. ...</i>
City		City	<i>Dayton, Ohio</i>
Telephone		Telephone	<i>424-4747</i>
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	

ADDRESSES		ADDRESSES	
Name		Name	Thomas C. Black
Street		Street	17 Oxford St.
City		City	Newark, N.J.
Telephone		Telephone	2-5221
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	

C

O

ADDRESSES		ADDRESSES	
Name		Name	Joe Aylward
Street		Street	
City		City	Fairmount, Ohio
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	
Name		Name	
Street		Street	
City		City	
Telephone		Telephone	

Asst. "Healthy" Machines

	Home	Field
①	H. B. K. 4	
②	J. S. O. K. 2. 19	
③	M. S. B. 2. 12	
④	J. S. O. K. 2. 9	
⑤	B. W. 2. 12	

Ames "Circles" Katalog

Num	Zeit
① M. M. K. 0.1	① A. J. D. 12
② C. A. K. 0.2	② D. G. J. K. 0.3
③ M. F. R. K. 0.3	③ H. R. K. 0.3
④ D. G. S. K. 0.11	④ M. M. K. 0.3
⑤ D. T. S. Q. K. 0.5	⑤ J. S. D. K. 0.12
⑥ V. T. S. Q. K. 0.11	⑥ M. A. S. D. 12
⑦ M. M. K. 0.11	⑦ D. G. J. K. 0.1
⑧ A. T. K. 0.7	

Anna "Candy" Ketystein

Home

604

(13) Mrs. B.C. D. 24

Miss Valley

Wagon	Foot
① A.D.S. K0.1	① A.H. K0.11
② M.A.S. K0.2	② M.S.B. K0.2
③ R.L.K. K0.3	③ A.P.B. P.13
④ J.B.D. P.12	④ A.S.B. K0.1
⑤ U.F.C. Q. K0.4	⑤ G.F. P.12
⑥ D.A.L. K0.4	⑥ M.A.S. K0.11
⑦ A.H.H. K0.2	⑦ M.A.C. K0.2
⑧ M.S.W. K0.7	⑧ G.C.K. K0.11

Quelle "Swift" Pritchard

Year	Lot
① R.T. K. 1.1	② J.S.D. K. 1.1
③ D.T.S. Q. K. 1.5	④ D.T.S. Q. K. 1.1
⑤ D. Q. S. K. 1.3	⑥ D. R. S. K. 1.5
⑦ R.T. K. 1.2	⑧ M.A.C. K. 1.2
⑨ D. Q. S. 2.11	⑩ J.S.D. K. 1.2
⑪ M.A.C. K. 1.6	⑫ M.A.C. K. 1.4
⑬ A.H.N. K. 1.7	⑭ J.S.D. 1.12
⑮ D.T.S. Q. K. 1.11	⑯ N.R. K. 1.11

9
J. Edgar Hoover, Pritchard

14.00

20.00

① 24.00.012

② 20.00.012

③ 18.00.012

Vicks 'Tack' Staff Quantities

Year	Staff
① A.C. DIV	① A.M.N. K-12
① B.T. DIV	② E.F.P. K-5
② C.S.P. K-1	③ A.M.N. K-12
② N.R. K-1	④ E.F.P. K-11
③ A.S. K-12	⑤ B.T. K-4
④ C.A. K-10	⑥ N.R. K-12
⑤ B.T. K-12	⑦ A.S. K-12
⑥ J.F.D. DIV	⑧ W.M. K-3

U.S. Post Office - Quantico

From

To

① A.P.K. Hall

A

~~Many found Books~~

Name	Book
① W. W. K. 2	① W. A. G. K. 2
② H. R. D. 12	② W. D. S. K. 5
③ H. B. K. 2	③ H. B. K. 10
	④ W. A. G. D. 12
	⑤ C. B. K. 2
	⑥ A. E. K. K. 7
	⑦ J. S. D. K. 11
	⑧ S. R. P. K. 15

May Louis Radeke

was

with

① B.H.M. DIE

② M.K.B. DIE

③ B.T. DIE

Handmade Koon Bilag

West

East

① M. L. R. 012

② M. A. L. 024

③ C. D. K. 008

④ A. R. K. 001

Delena Russell

- | Year | Goal |
|-----------------|-----------------|
| ① M.A.S. K0.6 | ② J.S.O. K0.4 |
| ③ M.S.R. K0.10 | ③ U.T.S.O. K0.1 |
| ④ A.S.K. K0.8 | ④ J.S.O. K0.9 |
| ⑤ U.T.S.O. K0.0 | ⑤ M.S.R. D.12 |
| ⑥ D.O.S. K0.5 | ⑥ C.S. K0.1 |
| ⑦ C.S.P. 5-1-12 | ⑦ A.M.N. K0.4 |
| | ⑧ A.M.N. K0.5 |
| | ⑨ M.S.R. K0.3 |

Valera Russell

you

lost

⑬ A.K.R. K.1

Quarterly Commodity Inventory

Item	Code
① M. J. M. D. 12	① M. J. M. K. 1
② A. T. K. 1	② U. T. S. O. D. 12
③ A. H. H. K. 14	③ S. S. P. K. 2
④ A. S. K. K. 2	④ S. S. P. D. 12
⑤ S. S. P. K. 5	⑤ U. T. S. O. K. 12
⑥ A. S. K. K. 1	⑥ S. S. K. 1
	⑦ A. S. K. K. 11
	⑧ M. J. M. D. 12

Case Tumbler

Year	Grade
① J.S.D. 314	① A.M.H. K-1
② J.S.D. K-2	② E.S.P. K-2
③ A.S.K. 312	③ V.S.S. 314
④ M.M. 314	④ E.S.P. K-2
⑤ V.S.S. 314	⑤ V.S.S. 314
⑥ M.S.R. 312	⑥ D.P. K-1
⑦ A.M.H. K-2	⑦ C.A. K-1
	⑧ A.M.H. K-2

Rose T. ...
W. ... East
① C. B. D. B.
② G. J. K. M. T.

margaret 'sister' stank
Nov 1941
① 11/11/41

June 8, 1950

SAC

SA WILLIAM E. HUGHES

HARRY GOLD was.
ESPIONAGE - R

ANALYSIS OF GOLD RESIDENCE SEARCH MATERIAL

EXHIBIT:

65-4307-1-B-5 (29-4)

REFERENCE:

Search memo SA (A) ELWOOD A. PETT
June 5, 1950, Page 14

DESCRIPTION:

A one page typewritten statement, apparently prepared by JACK BRUIN, who signed the statement giving a short history of himself reading as follows:

"Born Detroit, Michigan, May 12, 1912
Left for Russia with Mother in 1916
Staid five years, then came back in 1921
Education: Graduate Drexel Institute (Evening School)
Chemical Engineering Course in June, 1936
Left-Wing Jewish Worker's High School
Have a good understanding of Marxism, having taught fundamentals at one time.

Father is a former Trade Union Official, escaped from Russia in 1911
Mother dead. Was active in the Russian movement during the Revolution.

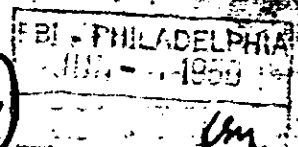
Have been connected with the Revolutionary Movement since 1925.
Organized first Lef-Wing Children's Group in Philadelphia.
Did anti-military work in 1931 and 1932 at the Citizen's Military Training Camps.

At present I am a member of the Federation of Architects, Engineers, Chemists and Technicians Union.

(Signed)
JACK BRUIN"

WER/kob
65-4307
CC: 100-5832

65-4307-1-B-5(29.4)



TO: SAC

June 8, 1950

POSSIBLE LEADS:

GOLD should be questioned re possible
Espionage activity of JACK BRUIN.

SAC, Philadelphia

6/23/50

SA T. SCOTT MILLER, JR.

HARRY GOLD, was.
ESPIONAGE - R

EXHIBIT No. 65-1307-1B-5 (29-4)

GOLD advised on 6/15/50 that JACK HEWIN was an individual whom GOLD knew at Drexel Institute under the name of JOE BRODKEY or possibly BROESKY. GOLD stated that he considered at one time recruiting HEWIN for use in Soviet espionage, not for the purpose of gathering information or the like, but for use in recruiting other people whom HEWIN might know. GOLD does not recall whether he reported anything on HEWIN to his Soviet contacts but probably did. He said he met HEWIN at Drexel sometime between 1934 and 1936, and that this biographical sketch on HEWIN must have been given to GOLD subsequent to 1936. GOLD said that he thought that possibly this was submitted at the time when his Soviet contact, FRED, was constantly bothering GOLD for suggestions as to possible recruits. GOLD said that HEWIN probably changed his name from BRODKEY to cover up his Communist Party activities.

GOLD said that he thinks that BRODKEY is presently selling newspapers at the University of Pennsylvania Hospital, although he was a chemical engineering student at Drexel.

GOLD said that BRODKEY never tried to get GOLD to go to Communist Party meetings or join the Party, but that on occasions BRODKEY did try to get GOLD to give contributions to Communist organizations, the identities of which GOLD could not recall.

GOLD said that HEWIN is married and lives somewhere in the Wynnsfield section of Philadelphia, maybe in the vicinity of the University of Pennsylvania Hospital.

TSM:HKF
65-1307

6/1/50
29-4

Born Detroit, Mich., May 12, 1912.
Left for Russia with Mother in 1916.
Staid ~~two~~ years, then came back in 1921.

Education; Graduate Drexel Institute (Evening School)
Chemical Engineering Course-June 1936.
Left-wing Jewish Worker's High-School.
Have a good understanding of Marxism, having
taught fundamentals at one time.

Father is a former Trade Union official, Escaped from
Russia in 1911. Mother dead. Was active in the Russian
movement during the Revolution.

Have been connected with the Revolutionary movement since
1925. Organized first Lef-wing children's group in Phila.
Did Anti-military work in 1931 and 1932 in The Citizen's
military training camps.

At present I am a member of the Federation of Architects,
Engineers, Chemists and Technicians Union.

Jack Brown

6/26/50

SAC

SA T. SCOTT MILLER, JR.

HARRY GOLD, was.
ESPIONAGE - R

65-4307-1-B-5 (29-5)

Re memo 6/7/50 dealing with above exhibit.

This letter was shown to GOLD on June 21, 1950, at which time he identified it as a letter he received from BROTHMAN prior to the time he went to work for BROTHMAN in 1946.

GOLD stated that prior to the time he worked for BROTHMAN, he did legitimate work for BROTHMAN on the synthesis of methyl methacrylate monomer, and that this letter requested GOLD to do some work on this process. GOLD extracted three white sheets of paper bearing his handwritten notations from exhibit 65-4307-1-B-5 (29-6), as relating to work he did on the synthesis of methyl methacrylate monomer.

GOLD stated that the numbers on the right hand side of the first two pages refer to chemical abstract numbers and page numbers. The material listed on the left of these sheets of paper refers to patent numbers. The question marks placed after some of these notations indicate that the abstract is of dubious value. The last four lines on page two are a summary, and the numbers under the column entitled "Sure" refer to those abstracts which are of definite value.

Relative to page three, these notations refer to patents and the name WILLIAM S. JOHNSON probably is an individual who was contacted at the Rohm and Haas Company, relative to a process covered by one of the patents. GOLD stated that the handwriting on page three, wherein the name of WILLIAM S. JOHNSON is set out, is the handwriting of MORRELL E. DOUGHERTY, and that DOUGHERTY is probably the individual who called JOHNSON.

GOLD stated that BROTHMAN did not actually know GOLD's true name until the time GOLD went to work for BROTHMAN in 1946, GOLD said,

TSM:cab
65-4307

SEARCHED	INDEXED
SERIALIZED	FILED
JUL 10 1950	
FBI - PHILADELPHIA	

65-4307-1B-5
(29-5)

Memo, SAC

6/26/50

however, that he had given BROTHMAN his real name and legitimate address but told BROTHMAN at the time that HARRY GOLD was a "drop" and BROTHMAN could reach him (FRANK KESSLER, the alias of GOLD) through HARRY GOLD.

The handwritten notations on the back of BROTHMAN's letter are those of GOLD's.

SAC

6/7/50

SA WILLIAM H. NAYLOR

HARRY GOLD, was.
ESPIONAGE - R

RE: GOLD RESIDENCE SEARCH MATERIAL

Exhibit No. 65-4307-1-B-5 (29-5)

Reference memo 6/5/50, Page 14.

Description:

A typewritten letter from A. BROTHMAN to HARRY GOLD dated 8/8/45 on letterhead of A. BROTHMAN & ASSOCIATES, Chemical and Mechanical Engineers, 114 East 32nd Street, New York. The letter sets forth five questions which BROTHMAN requested GOLD to answer on the Synthesis of Methyl Methacrylate Monomer.

Possible Leads:

No apparent leads other than this letter which may have some connection with Exhibits #34 and #35.

WHN:ams
65-4307

PHILADELPHIA
JUN 10 1950

Wm

ams

A. BROTHMAN & ASSOCIATES

Chemical and Mechanical Engineers

114 EAST 32nd STREET

NEW YORK 16, N. Y.

6/3/50
RMB
279
29-5

August 8, 1945

Mr. Harry Gold
6823 Kindred Street
Philadelphia, Pa.

Dear Harry:

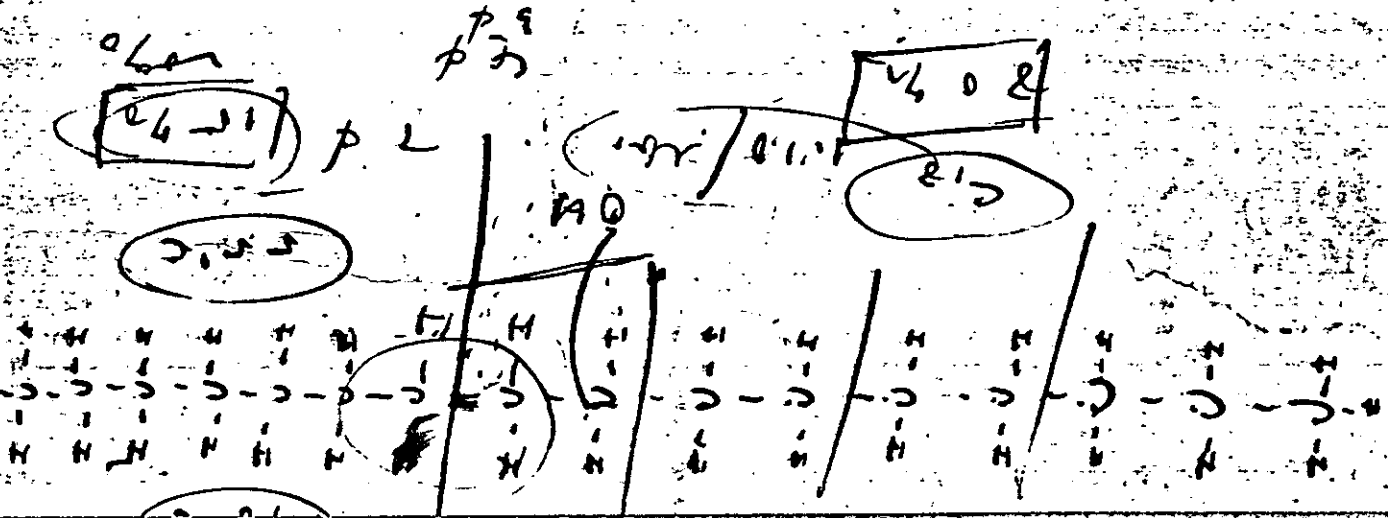
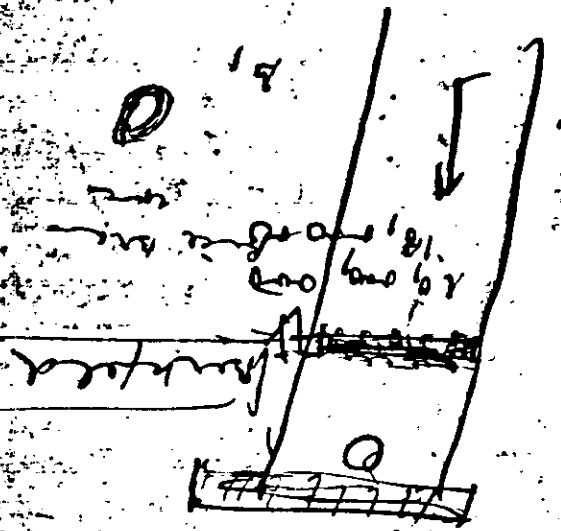
Relative to our discussion on the synthesis of methyl methacrylate monomer and the information which you may be able to get on this, the following questions are of interest to us:

1. Is the method being used which involves the conversion of acetone to acetone cyanhydrin, the conversion of acetone cyanhydrin to methacrylamide, and the "joint" hydrolysis and esterification of the methacrylamide?
2. If so, what are the conditions under which the conversion to the methacrylamide and the joint hydrolysis and esterification are carried out?
3. What are the commercial yields obtained by this process, if it is being used?
4. If this process is not being used, what are the yields obtained by the process in use, and what is the process in use?
5. Regarding the polymerization of the methacrylate to sheet glass, the following are questions of interest to us:
 - a. Is the sheet glass now being produced a polymer or a co-polymer? If the latter, what is the co-polymer?
 - b. What is the construction of the mold and the procedures involved in the use of the mold?
 - c. What catalyst is being used and how much?
 - d. What are the time and temperature conditions for polymerization?
 - e. Are any cross-linking or plasticizing agents being used, and if so, what are they?

2/18/5

McGraw-Hill

... to the ... of the ...
... of the ... of the ...
... of the ... of the ...

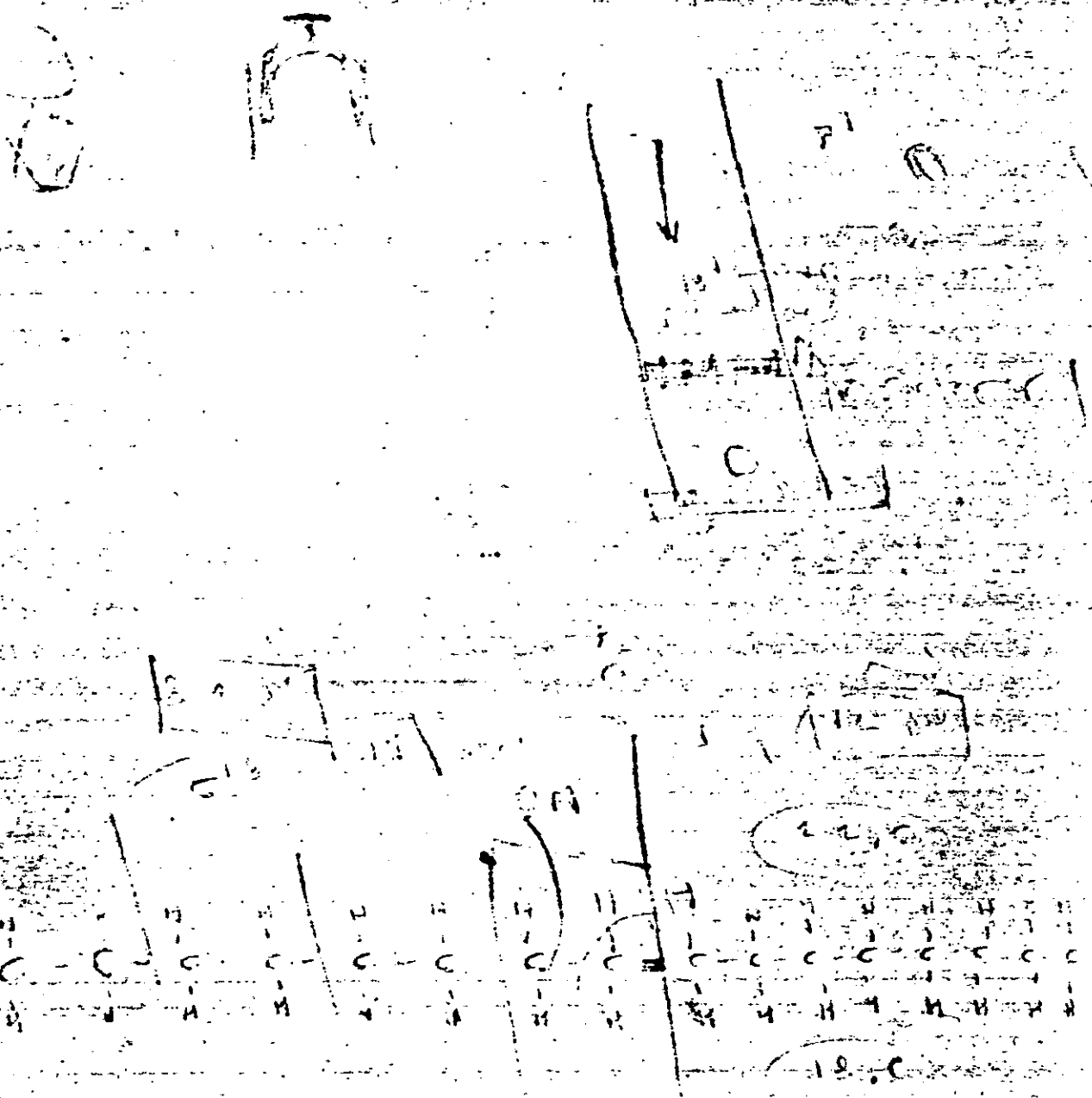


Mr. Harry Gold - 8/8/45

The answers to any or all of these questions will be very much appreciated, and we would be interested, if this is feasible, in acquiring the services as a consultant of anyone whom you can get to answer these questions.

Very sincerely yours,

A. Brothman



Harry Gold
49 Mandala St.
Cincinnati, Ohio
also,
5022 N. Audinot St.
Phila., Pa.

6/8/50
JTB
29-8

44-38861-1000

TERRY & SIEBERT. Analytical Chemists

ESTABLISHED 1876

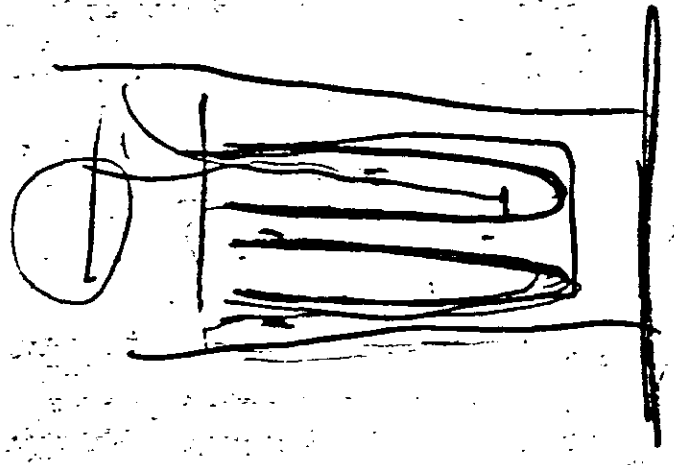
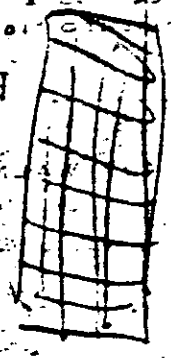
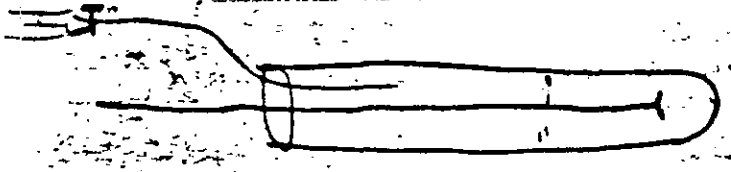
VITAMIN ASSAYS

LABORATORY : 127 WALNUT STREET • PHILADELPHIA, PENNSYLVANIA

65-4307-1-B-5(29-9)

TERRY & SIEBERT Analytical Chemists

VITAMIN ASSAYS



SAC

June 7, 1950

SA WILLIAM E. HUGHES

HARRY GOLD was.
ESPIONAGE - R

ANALYSIS OF GOLD RESIDENCE SEARCH MATERIAL

EXHIBIT:

65-4307-1-3-5 (29-11)

REFERENCE:

Search memo of SA (A) ELWOOD A. PETT
June 5, 1950, Page 35

DESCRIPTION:

A small white card approximately 2" x 3"
containing pencil handwritten notations
on both sides reading as follows:

(Writer's opinion)

"1. Sept. '40 gave mat. on manuf. of
acetyl butyrate base for airplane films.
Would like one again.

"2. Info. on hi sensitivity air plane film - foto

"3. Samples & meth. of manuf. of trichromatic film
color

for colored photograph of Kodak type (Koda Chrome)

"4. In other field anything in his reach of
military importance."

An extra copy of this memorandum has been prepared because the
possibility exists that the above quoted material may relate to
either contact with ALFRED BEAN SLACK or HOWARD GOCHENAUGH, both of
whom were employed at Eastman Kodak.

POSSIBLE LEAD:

Question GOLD regarding information contained on
this card.

WEH/mob
65-4307

ITEM # III

PHILA FILE # 65-4307-1B-5 (29-11)



65-4307-1B-5 (29-11)

10/12/65
D. S.

111

for colored photo copying
of the Kodak type
(Kodachrome)

... in other parts as any thing
is his job & if much more
important.

6/3/50
29-11
200

Left to ...
amount of acetyl butyrate
back for distal and films
would like to again
Left on the sensitivity
and plain films
samples to ...
of the ...

SAC

SA WILLIAM E. HUGHES

June 8, 1950

HARRY GOLD was.
ESPIONAGE - R

ANALYSIS OF GOLD RESIDENCE SEARCH MATERIAL

EXHIBIT:

65-4307-1-B-5 (29-12)

REFERENCE:

Search memo SA (A) ELWOOD A. PETT
June 5, 1950, Page 15

DESCRIPTION:

A small sheet of paper, about 2" x 4", such as would come from a small pocket notebook bearing illegible, pencil notations which appear to be a poem, part of which appears to be shorthand or a foreign language, the majority of which is illegible.

POSSIBLE LEADS:

Show this sheet of paper to GOLD for him to decipher.

WEH/kob
65-4307

65-4307-1-B-5(29-12)

SAC, Philadelphia

6/23/50

SA T. SCOTT MILLER, JR.

HARRY GOLD, was.
ESPIONAGE - R

EXHIBIT NO. 65-4307-1-B-5 (29-12)

GOLD stated on 6/15/50 that this was in his handwriting and was a poem written about JEAN, whom he described as REGINA LOOKABAUGH, and BOBBY, whom he described as JEAN's nephew. GOLD could decipher the first two or three lines, which read as follows:

Oh, Bobby was a handsome lad,
A sturdy, likeable boy,
etc. etc.

TSM:HKP
65-4307

not it would be
beauty that did
the trick
(for pretty good
that good too)
not only a small
piece of country
a permanent
life - save.

How
many
a little on the
did make money
for a life - save

6/1/50
29-12

do it here like the first
No. 1 better than last
70 minutes in room
I will be there at 10
concluded

The story was a
handwritten note
a study of the boy,
and from who he came
a series of poems & say

And our own words
and a hand-drawn dot
and full on a man
only one,
To all the world of a
little book
in the memory of his own

IF NOT DELIVERED IN 3 DAYS, RETURN TO
THE PROVIDENT SAVINGS BANK & TRUST CO.
PROVIDENT BANK BLDG., S. E. COR. 7TH & VINE STS.
CINCINNATI, OHIO

THE PROVIDENT SAVINGS BANK & TRUST CO.

Henry Gold

6/2/50
M
C

29-13

65-4307-1-B-5(29-13)